MAY 15, 1949

MODERN MEDICINE

The Journal of Diagnosis and Treatment

Complete table of contents page 10

Dr. Frank H. Lahey *(see page 10)*

TO VITALIZE THE

"*Sickly*" CHILD...

You know little fellows like this—never really well—always hypersusceptible to every infection and childhood disease. Their recovery from each illness is distressingly slow and leaves them listless, sluggish in appetite, dull of eye and sallow skinned. For such as these, prescribe:

INFAZYME

A Specialized Nutrient for Infants and Children providing

B COMPLEX • IRON • AMINO ACIDS

A CONCENTRATED RECUPERATIVE NUTRIENT specifically for children, providing supplementary amounts of the amino acids, readily available iron, and high potencies of the clinically important B vitamins complemented with the whole B complex as derived from liver, rice bran and hydrolyzed yeast. The 30% yeast hydrolysate in Infazyme contains all ten essential amino acids, with polypeptides and other amino acids, in adequate amounts to stimulate vitamin assimilation and hemoglobin formation.[1,2] So, in addition to prodding a "lazy" appetite,[3] Infazyme facilitates more complete utilization of the child's food.

TASTE APPEAL—Infazyme has a rich fruity tang that is accepted eagerly by even the anoretic child. Typical liver, iron and amino acid tastes are successfully disguised. Usual dosage is 5 cc. (1 teaspoonful) three times a day, preferably in milk or fruit juice, before or with meals.

Infazyme ®

✓ *Check this unique FORMULA*

Each 15 cc. contains:

Protein Hydrolysate (45% amino acids)	5.0 Gm.
Thiamine Hydrochloride	3.0 mg.
Riboflavin	2.0 mg.
Niacinamide	12.0 mg.
Pyridoxine Hydrochloride	1.0 mg.
Liver, B Complex Fraction	67.5 mg.
Rice Bran Extract	67.5 mg.
Peptonized Iron, N. F.	135.0 mg.

Available at prescription pharmacies and hospitals in 4-oz. and 12-oz. bottles.

1. Ruskin, S. L.: The role of the coenzymes of the B complex vitamins and amino acids in muscle metabolism and balanced nutrition, Am. J. Dig. Dis. **13**:110-112 (1946).
2. Jacobson, M.: Preliminary report on the combined effects of vitamin B complex with amino acids, N. Y. State J. Med. **45**:2079-2080 (1945).
3. Summerfeldt, P. and Ross, J. R.: Value of an increased supply of vitamin B and iron in the diet of children, Am. J. Dis. Child. **56**:985-988 (1938).

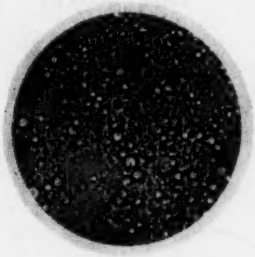
MERRELL 1828

THE WM. S. MERRELL COMPANY • CINCINNATI, U. S. A.

BABY LOTION "10FA,"*

leaving discontinuous film, reduces incidence of miliaria from 55% to 3%

THE IDEAL preparation for infant skin care . . . should it leave a solid layer . . . or a *discontinuous film?*



Recent studies at a Chicago hospital, where various preparations were tested on 2,077 newborn infants, prove that the *lotion* type of preparation (specifically, Lotion "10FA"*), which leaves *a discontinuous* film on the skin, produces decidedly superior results.

As reported in the Amer. Jour. of Diseases of Children (March, 1948) the case incidence of miliaria was reduced from 55% to 3% with the use of Lotion "10FA."*

"This reduction in the occurrence of miliaria appeared to be due to the use of an oil in water emulsion. (Lotion "10FA."*)

"An important advantage accrues from the inherent discontinuous, but protective, film, which does not interfere to any significant degree with the metabolic and respiratory functions of the skin."

Unlike many other preparations, this smooth white Lotion produces no "smothering" effect which interferes with the process of respiration.

This is particularly important in summer, when infants perspire excessively and the rate of miliaria normally increases. Emphasizing the superiority of Lotion "10FA" was the sharp drop in summer incidence of miliaria.

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FREE! Mail coupon for 12 distribution samples!

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Please send me 12 free distribution samples of Johnson's Baby Lotion.

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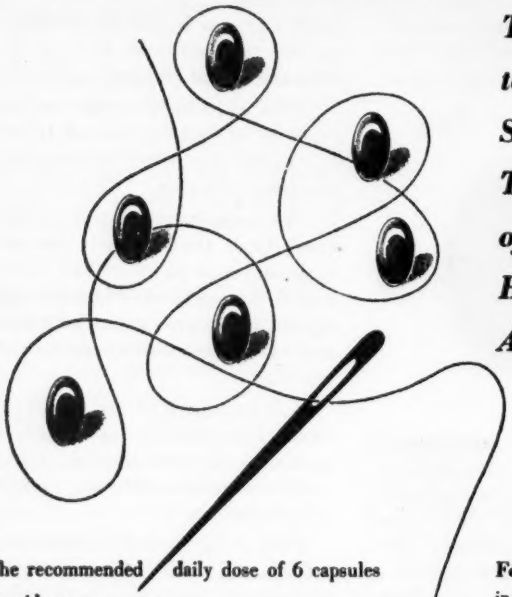

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The recommended daily dose of 6 capsules provides:

Ferrous Sulfate	(15 gr.)	972.0 mg.
Liver concentrate 1:20	(15 gr.)	972.0 mg.
Folic acid		4.5 mg.
Thiamine hydrochloride (vitamin B_1)		6.0 mg.
Riboflavin (vitamin B_2)		6.0 mg.
Niacinamide		24.0 mg.
Pyridoxine hydrochloride (vitamin B_6)		3.0 mg.
Calcium pantothenate		3.0 mg.
Ascorbic acid (vitamin C)		90.0 mg.

For Therapy

in hypochromic anemias: two (2) HEMOSULES* three times a day after meals.

For Prophylaxis and/or Maintenance

in conditions predisposing toward anemic states, *i.e.*, pregnancy, fever, respiratory disorders, infectious diseases, nutritional disorders, etc.: one to three (1 to 3) HEMOSULES* daily, or more, as prescribed by the physician.

HEMOSULES* 'Warner,' hematinic capsules, are available in bottles of 96 and 250.

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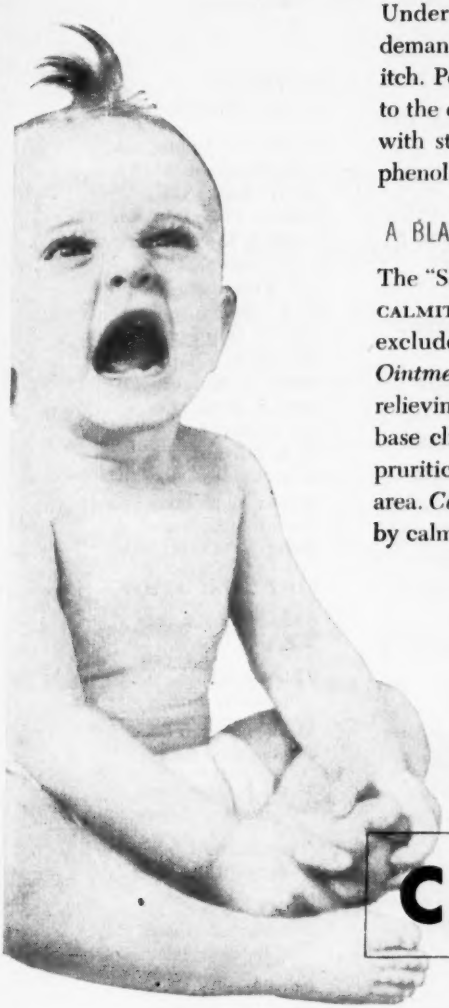

Understandably urgent, the pruritic infant demands rapid, *SAFE* control of symptomatic itch. Pediatricians, in particular, must be alert to the dangers of "imprudent topical therapy"[1] with stimulating or keratolytic drugs such as phenol, cocaine and cocaine derivatives.[2-6]

A BLAND AND EFFECTIVE RESPONSE

The "Safety First" of antipruritic treatment is CALMITOL OINTMENT, expressly formulated to exclude dangerous medicaments. *Calmitol Ointment* is promptly and lastingly effective in relieving the torments of itch. Its fine emollient base clings intimately and protectively to the pruritic lesion and the surrounding affected area. *Calmitol Ointment* calms the little patient by calming the pruritus.

1. Gaul, L. E.: J.A.M.A. 127:439, 1945.
2. Underwood, G. B., and Gaul, L. E.: J.A.M.A. 138:570, 1948.
3. Underwood, G. B.; Gaul, L. E.; Collins, E., and Mosby, M.: J.A.M.A. 130:249, 1946.
4. Andrews, G. C.: Disease of the Skin, Philadelphia, W. B. Saunders Co., 1946.
5. Ormsby, O. S.: Diseases of the Skin, Philadelphia, Lea and Febiger, 1937.
6. Gaul, L. E.: Hygeia 23:280, 1945.

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MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT

one of the reasons why you get quick results with Feosol Tablets

Feosol Tablets' special vehicle and coating ensure disintegration in the acid medium of the stomach and upper duodenum —the region most favorable to iron absorption. That is one of the principal reasons why Feosol Tablets achieve such rapid hemoglobin regeneration, such prompt reticulocyte response.

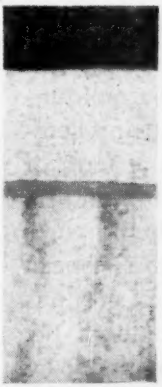
Smith, Kline & French Laboratories, Philadelphia

Feosol Tablets

the standard form of iron therapy

Microphotograph of cross section of Feosol Tablet

A special protective coating of fatty esters prevents oxidation of the ferrous sulfate to the relatively ineffective ferric form.



1 Outer coating

2 Under coating

3 Protective fatty esters

4 Compressed ferrous sulfate

STATISTICALLY SIGNIFICANT

Recent important investigations confirm superiority of molybdenized ferrous sulfate in iron-deficiency anemia.

Dieckmann, W. J., and Priddle, H. D.: Anemia of Pregnancy Treated with Molybdenum-Iron Complex, Amer. J. Obstet. & Gynecol., (March) 1949.

Dieckmann and associates recently undertook an evaluation of molybdenized ferrous sulfate (Mol-Iron) in anemia of pregnancy—a relatively resistant type of anemia.

A carefully selected group of patients was given Mol-Iron in a dosage of 2 tablets 3 times daily; a comparable group of patients who received no iron medication served as controls.

FINDINGS: "The patients who were treated showed a rapid increase in hemoglobin and hematocrit with a mean at term of 11.8 Gm. per 100 ml. and 36 volumes per cent—high figures for pregnant patients. The mean for the present control group is 10.7 Gm. of hemoglobin per 100 ml. and a hematocrit of 32.6 volumes per cent (at term) . . . At six weeks post partum, the patients who had been on molybdenum-iron had a mean of 12.2 Gm. per 100 ml. as compared with 11.2 for the present (control) group . . ."

COMMENT: "We have never had other iron salts so efficacious in pregnant patients. Our results with the molybdenum-iron complex have been so striking that, if the patient has taken this medication for three weeks and shown no significant increase in the hemoglobin concentration, the therapy is stopped and a more extensive study (bone marrow biopsy, gastric analysis, reticulocyte count, etc.) made to determine the cause of the anemia."

SUMMARY: "We believe the value of this molybdenum-iron complex has been demonstrated as being very effective in increasing the hemoglobin of pregnant patients who are anemic."

ADVANCE IN ANEMIA THERAPY

Talso, P. J.: Anemia in Pregnancy, J. Ins. Med., 4:31-34 (Dec.-Jan.-Feb.) 1948-1949.

"The encouraging results obtained with molybdenumized ferrous sulfate in the microcytic hypochromic group indicate a better prognosis in these conditions in the future with a resultant improvement in maternal health generally."

Chesley, R. F., and Annitto, J. E.: Evaluation of Molybdenized Ferrous Sulfate in the Treatment of Hypochromic Anemia of Pregnancy, Bull. Margaret Hague Maternity Hospital, 1:68-75 (Sept.) 1948.

". . . molybdenized ferrous sulfate produced a substantially more rapid therapeutic response than ferrous sulfate, the difference in response being statistically significant. Addition to ferrous sulfate of either liver-stomach extract or folic acid did not potentiate the action of the iron salt.

"None of the patients treated with molybdenized ferrous sulfate complained of more than mild digestive symptoms related to the medication. However, 8 per cent of the patients originally selected for treatment with ferrous sulfate had to be withdrawn from the study because of consequent digestive up-sets."

White's **Mol-iron** Tablets, Liquid

MOLYBDENIZED FERROUS SULFATE

a specially processed, co-precipitated, stable complex of molybdenum oxide 3 mg. (1/20 gr.) and ferrous sulfate 195 mg. (3 gr.). In bottles of 100 and 1000 Tablets. Also available in a highly palatable Liquid, in bottles of 12 fluid-ounces.

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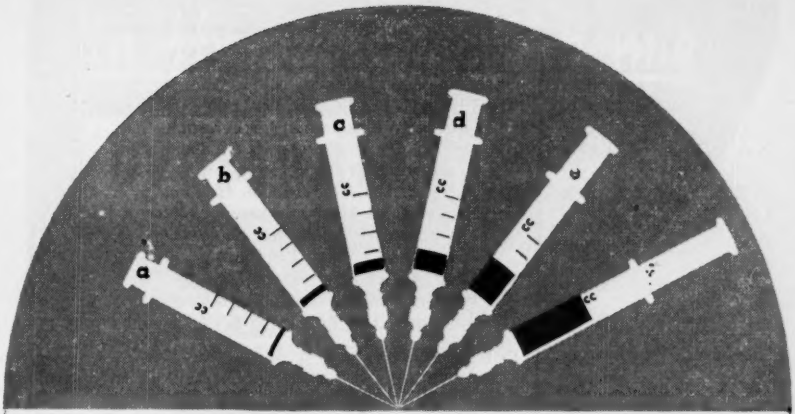
Contents for May 15 1949

VOL. 17, NO. 10

The man on the cover is Dr. Frank H. Lahey, as all of you know. He is the author of the report on "Repair of Bile Duct Injury" on page 49 of this issue. A Major in the Medical Corps, World War I, he was Chairman of the Procurement Service for the Armed Forces in World War II, Chairman of the Consulting Board to the Navy, and after the war was appointed by the President to the Committee on Integration of Medical Services in the Government. He is director of the Lahey Clinic and has been Professor of Surgery at Tufts College and Harvard Medical School.



equal in antianemia potency

The volume of parenteral liver extract represented in syringe "a" is *one-twentieth* of that contained in syringe "f." The antianemia potency of the volume illustrated in each syringe is the same. Regardless of the concentration selected, there is available a Lilly preparation that will completely maintain the pernicious anemia patient. • The antianemia potency of 'Reticulogen' (Parenteral Liver Extract with Vitamin B_{12}, Lilly) is such that, in uncomplicated cases of pernicious anemia, no more than *one-twentieth* cubic centimeter is required per day to maintain satisfactory red-blood-cell and hemoglobin levels and to prevent the advancement or development of neurological complications. This certain response to every lot of 'Reticulogen' has been determined by standardization on known cases of pernicious anemia.

Specify 'Reticulogen,' the most potent injectable liver extract available, the next time you order through your usual source of supplies.

Complete literature on 'Reticulogen' is available from your Lilly medical service representative or will be forwarded upon request.

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LETTER FROM THE EDITOR

Dear Reader:

Although upward of a million Americans are known to have diabetes, probably at least that many more have the disease without knowing it.

Diabetes is hereditary and one-fourth of our people carry a diabetic strain. Early detection and treatment are of the utmost importance.

In the June 1 issue of *Modern Medicine* the present status of the diabetes problem will be discussed from every angle by outstanding authorities. The table of contents includes:

C. H. Best, President, American Diabetes Association
Foreword

Howard F. Root, Harvard University
Diabetes in America: Current Problems and Needs

Elliot P. Joslin, Harvard University
The Future Diabetic

George E. Anderson, Secretary, American Diabetes Association
Education and Diabetes Detection

Priscilla White, Tufts College
Diabetes Complicating Pregnancy

Henry J. John, Lakeside Hospital, Cleveland
Diabetes in Children

Lester J. Palmer, University of Washington, Seattle
Diet in Diabetes

Franklin B. Peck, Indiana University
The Insulins in Diabetes

Henry Dolger, Columbia University
Arteriosclerosis in Diabetes

J. Q. Griffith, Jr., Philadelphia
Ocular Complications of Diabetes

Jerome W. Conn, University of Michigan
Current Research Problems in Diabetes

This special issue is under the editorial direction of Dr. John A. Reed of our Editorial Board. Dr. Reed has worked closely with members of the American Diabetes Association to make the June 1 issue a comprehensive and authoritative report. Make a note now of the date, June 1. This issue is one you will want to read and reread. It is the last word on a topic of vital importance.

medical sympathectomy

IN PERIPHERAL VASCULAR DISEASE

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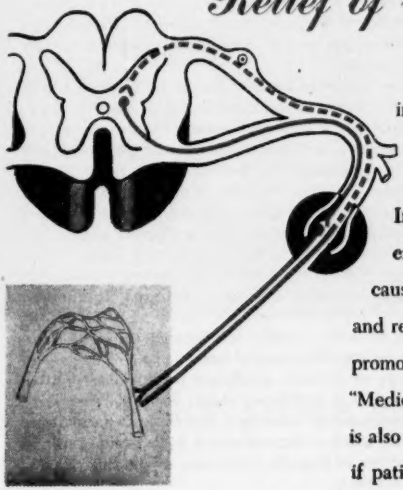

Relief of vasospasm, pain and trophic disturbances

in peripheral vascular disease can often be accomplished by medical block of autonomic ganglia with **ETAMON CHLORIDE.**

In thromboangiitis obliterans, arteriosclerosis obliterans, thrombophlebitis associated with spasm, causalgia or reflex dystrophy, Raynaud's phenomenon and related functional disorders, **ETAMON CHLORIDE** promotes increased blood flow to the affected extremities. "Medical sympathectomy" with **ETAMON CHLORIDE** is also indicated as a diagnostic procedure to determine if patients will be helped by *surgical* sympathectomy.

Administration: Intravenously or intramuscularly. **Dosage** varies according to physiologic needs of the tissues. ***Descriptive literature giving full details is available on request.***

PACKAGING: **ETAMON CHLORIDE** (tetraethylammonium chloride, Parke-Davis) is available in 20 cc. multiple-dose Steri-Vials®, each cc. of solution containing 0.1 Gm. of **ETAMON CHLORIDE.**

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MEDICAMENTA VERA · P D & CO.

Choline (Flint)

for a Better Prognosis in Chronic Hepatitis

It is now generally agreed that a fatty liver is the usual precursor of Laennec cirrhosis. Moreover, it is accepted that the responsibility for the development of cirrhosis in the alcoholic must be placed largely upon the notoriously deficient diets of those persons suffering from alcoholism, although alcohol per se may predispose toward degenerative changes in the liver cells.

Alcoholism cannot in any sense be considered the *sine qua non* of fatty degeneration of the liver for this condition is a common manifestation of undernourishment or malnourishment of whatever origin. Hepatic dysfunction, characterized by excessive accumulation of lipid materials in the liver, is a complicating feature of ulcerative colitis, cachectic states, diabetes mellitus, hypothyroidism, lesions of the pituitary gland, chronic sepsis, tuberculosis and many other disorders commonly considered to be purely extra-hepatic disorders.[1]

NUMBER 19 OF A SERIES

Serial biopsy studies on patients with pellagra in South Africa offer convincing evidence that fatty liver is the earliest observable lesion of a series of changes which eventually progress to Laennec cirrhosis.[2]

The demonstration of such a causal relationship between nutritional deficiencies and the development of hepatic failure has stimulated experimental study of cirrhosis produced by various types of dietary deficiencies. In all such deficiency states fatty liver appears to be a common denominator of observed histologic changes, and apparently any condition which is characterized by a prolonged and pronounced fatty infiltration of hepatic tissue may eventually result in irreversible periportal cirrhosis.

Syrup **Choline** Dihydrogen Citrate (Flint), a completely stable and palatable source of the lipotropic agent, **choline**, is indicated in conditions in which hepatic insufficiency may be associated with altered lipid metabolism. "Syrup **Choline** (Flint)"—25% W/V—containing one gram of **choline** dihydrogen citrate in each 4 cc., is supplied in pint and gallon bottles. The specification of "Syrup **Choline** (Flint)" will insure the use of a **choline** product offering complete patient acceptance.

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For your copy of The Present Status of Choline Therapy in Liver Dysfunction, write—

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DECATUR, ILLINOIS

1. Moschcowitz, E.: Laennec Cirrhosis; Its Histogenesis, with Special Reference to the Role of Angiogenesis, Arch. Path., **45**:187 (1948).
2. Gillman, J., and Gillman, T.: Structure of the Liver in Pellagra, Arch. Path., **40**:239-263 (Oct.) 1945.

"It's the same thing every month!"

But It Needn't Be!

There's never a time when Anacin can bring more gratifying relief than during the menstrual period. Why not advise your patients who suffer periodic cramps to take Anacin tablets. Its dependable A-P-C formula will give fast, effective relief with a duration of action that exceeds the effectiveness of plain aspirin. Anacin is easily available to you and your patients at all hospital pharmacies and drug stores.

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Correspondence

Communications from the readers of MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Corneal Lesion in Young Woman

TO THE EDITORS: In regard to the twenty-five-year-old woman with a small lesion in the cornea, whose chief symptoms are fatigue, leg pain, and nervousness (*Modern Medicine,* Mar. 15, 1949, p. 16), I have found that these symptoms are frequently helped a great deal by small doses of thyroid.

Her basal metabolic rate is reported as minus 8. In the case of a nervous patient, the reported rate is usually inaccurate because the subject is unable to relax completely. Therefore, it is quite possible that her true rate is much lower.

A dose of 0.5 gr. to start, with the possibility of increasing it to 1 gr., will undoubtedly relieve the leg pains and do much to help the fatigue and irritability. I have not only used this on patients but on myself, with great success.

MARGARET H. GANTT, M.D.
Madison, N. J.

► TO THE EDITORS: May I help my colleague from Georgia? *(Modern Medicine,* Mar. 15, 1949, p. 16.) If the arcus senilis is in the lower half of the cornea, it is seen, in younger persons, with hypercholesteremia.

THEODORE FISCHER-GALATI, M.D.
Lawrence, Mass.

Poison Ivy Remedy

TO THE EDITORS: I am a registered nurse working in a physician's office and read *Modern Medicine* regularly.

In an article on dermatologic disorders, Dr. Howard T. Behrman states that the field is wide open for research to find a substance for curing poison ivy (Mar. 15, 1949). Twenty some years ago when I was a student nurse at Temple University Hospital, I took down the following remedy for poison ivy, given to us by the chief of Pediatrics at that time:

Remedy: 10 to 15 drops of Tr. ferric chloride in full glass of milk three times a day, by mouth of course, not a local application.

For years I have used this for my children, and for others. It has never failed to work, even when immunization shots have shown no results. I have told several doctors about it and they invariably laugh and call it a quack remedy. I wish some dermatologist would give it a fair trial.

JEANNE M. YOST, R.N.
Louisville

Expectations Too Great

TO THE EDITORS: I was interested in your recent Washington Letter concerning Mr. Lilienthal's favorable estimation of present-day medical minds as these pertain to radioactive isotopes (Mar. 15, 1949, p. 46). The idea that

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LITTLE OR NO IRRITATION!

In 1948, this basically new product won nation-wide acclaim . . . Physicians, nurses and hospital authorities welcomed SEAMLESS PRO-CAP ADHESIVE PLASTER as a scientific advance that has long been needed . . . Thousands of tests have proven that PRO-CAP is the answer to those annoying and troublesome problems that have long been an obstacle to physicians and nurses . . . A notable success because it fills a widespread and serious need . . . Sold only through leading surgical and hospital supply dealers . . . *Write now for illustrated brochure and reprints of medical reports.*

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SEAMLESS

the profession could spread the story regarding radioactive isotopes intelligently is indeed a compliment. However, at the present time, I do not believe that 10% of the entire profession understand any more about radioactive isotopes than the public.

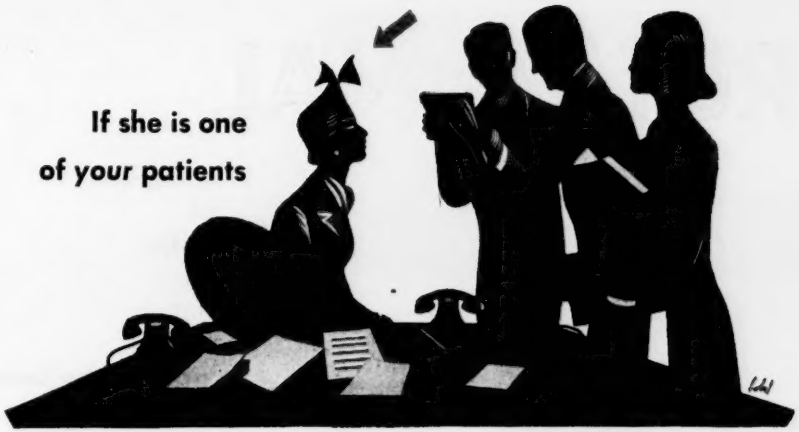
I dare say that any physicians who might explain the nature of isotopes to the public are concerned in the practice of radiology or have had some basic education in the fundamentals of physics and chemistry. Certainly the education received at medical schools in the past or even today allows but few of us to speak fluently in the field of radioactive isotopes.

As for Mr. Lilienthal's reasons for the failure of physicians to help spread the word concerning a subject that rightfully belongs in the classification of specialties, I take exception to the first reason, in which he states that we are too lax in following the developments in radioactive research and application. In this age of rapid medical progress, it is nearly impossible for the physician to keep up with the latest methods of diagnosis and treatment of diseases known to the profession today. There is little time left for anything else.

Perhaps Mr. Lilienthal should be requested to apply his knowledge of radioactive isotopes to medical science in a practical manner. Of course, this would mean that he would have to apply himself, somewhat, to obtain an adequate speaking knowledge of the fundamentals of medicine as applied to the clinical and scientific practice of medicine. At a nominal cost, such knowledge may be obtained at any medical college in a period of six to ten years. I think one request is just about as easily fulfilled as the other.

R. L. NOONAN, M.D.

Dallas, Tex.



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4. This "Plus" (the sense of well-being enjoyed by the patient) is conducive to a highly satisfactory patient-doctor relationship.
5. Four potencies provide flexibility of dosage: 2.5 mg., 1.25 mg., 0.625 mg. and 0.3 mg. tablets; also in liquid form, 0.625 mg. in each 4 cc. (1 teaspoonful).

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complicating
hazard
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100
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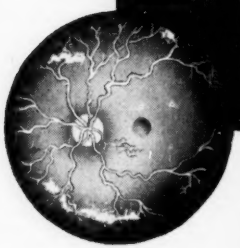
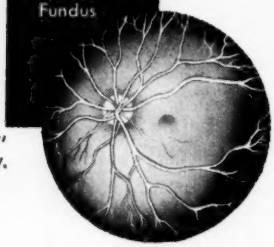
Ocular Fundus in Degenerative Vascular Disease—Hypertension, Diabetes, Arteriosclerosis —note tortuous blood vessels, areas of exudation, hemorrhagic areas.



Normal Ocular Fundus



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new! new! new!

accent on therapeutics!

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Vitamin D (natural)	*1,000 Units*	*Inositol*	*10 mg.*
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Folic Acid	*1.76 mg.*	*Calcium* (as 0.54 Gm. di-calc. phosphate)	*160 mg.*
Thiamine HCl (B_1)	*15 mg.*	*Phosphorus*	*132 mg.*
Niacinamide	*150 mg.*	*Iron*	*15 mg.*
Riboflavin (B_2)	*10 mg.*	*Copper*	*1.5 mg.*
Pyridoxine HCl (B_6)	*5 mg.*	*Manganese*	*1.0 mg.*
Alpha-Tocopherol (E)	*10 mg.*	*Magnesium*	*1.0 mg.*
*Liver Fractions**	*200 mg.*	*Zinc*	*1.0 mg.*
**B complex factors derived from 7.5 Gm. of liver*		*Iodine*	*0.1 mg.*

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TO THE EDITORS: I would like to express my appreciation for receiving *Modern Medicine*. It helps to save my time and I still can keep up with the latest medical discoveries and new methods of treatment.

W. W. TROSTEL, M.D.

Piqua, Ohio

Fine Contents

TO THE EDITORS: Your magazine reaches me regularly and I read it and derive many constructive thoughts and much information from its fine contents.

REGINALD EVERETT, M.D.

New York City

Vitamin D in Enriched Milk

TO THE EDITORS: We have noted in your Questions and Answers section a query as to which is the best source of vitamin D—cod-liver oil or vitamin D enriched milk (Jan. 15, 1949, p. 32). I believe that the question was interpreted correctly as pertaining to comparative desirability of use rather than to comparative vitamin D content per unit weight or volume.

The answer stated that cod-liver oil is superior to enriched milk as a source of vitamin D. This reply is somewhat surprising and I would like to comment on several of the points which were listed.

In point No. 1 it is stated that most enriched milk does not contain enough vitamin D to serve as the sole source of this vitamin for a growing child. There is good evidence to show that this statement is to be questioned. First, all evaporated milk is now fortified with added vitamin D in the amount of 400 USP units per reconstituted quart. Not all bottled milk is

(Continued on page 99)

one and one-half acres

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The fluid that inundates the tissues during congestive heart failure may pass through approximately one and one-half acres of capillary wall. Following an intramuscular or intravenous injection of MERCUHYDRIN, edema fluid comprised of water and salts, chiefly sodium chloride, is mobilized back through the one and one-half acres of the capillary bed and is eliminated through the kidneys. The diuresis obtained with MERCUHYDRIN benefits not only the patient with palpable edema, but also the patient subject to cardiac decompensation. "The effect on dyspnea in these cases of left-sided failure is probably largely a result of diminution in pulmonary edema, even though the latter is clinically occult."*

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*Fishberg, A. M.: Heart Failure, Lea and Febiger, Phila., 1946, p. 733.

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Forensic Medicine

COMPILED BY ARTHUR L. H. STREET, LL.B.

PROBLEM: Is an x-ray print admissible as evidence in court when the negative cannot be produced?

COURT'S ANSWER: Yes.

The Kentucky Court of Appeals says that such a print "is no less authentic than a print made from the negative of any other film. It is . . . often, if not always, clearer than the negative to the eye of a layman" (217 S. W. 2d 822).

PROBLEM: The Ohio statutes provide for licensing of persons to practice limited branches of medicine and require that the state medical board "call to its aid" one of "established reputation and known ability in the particular limited branch" for which an applicant seeks a license and is being examined. An applicant for a license to practice mechanotherapy failed to pass in anatomy, physiology, chemistry, diagnosis, and pathology when examined by the board, but was graded 77.5 in an examination in mechanotherapy given by a specialist in that field. Did the state board wrongfully refuse to license plaintiff?

COURT'S ANSWER: No.

The Ohio Court of Appeals, Franklin County, decided that the legislature did not intend to permit the specialist, called in to aid the board, to control the entire examination as to the applicant's qualifications. It intended that the examination in basic subjects be controlled by the board. The board did not overexamine the applicant by requiring him to pass in the basic sciences mentioned above, nor was there anything to show that plaintiff's examination was improperly, arbitrarily, or capriciously graded. The court approved a New York court's observation in a similar case: "The court cannot re-examine the relator as to his qualifications o practice medicine, nor go over the studies in which he is said to be deficient. If it attempted to do so, the relator's road would be easy, for, with his experience, imperfect though it may be, he would no doubt pass a better medical examination than any court could be expected to give him. The law wisely intended no such result. It leaves the subject where it belongs—with those qualified to master it" (83 N. E. 2d 648).

PROBLEM: Could a Jewish hospital refuse to permit mohels to circumcise children there, although permitting physicians to do so?

COURT'S ANSWER: Yes.

The New York Supreme Court, New York County, decided that no state or federal constitutional law, including the New York Civil Rights Law, was violated. Plaintiffs were not excluded on account of "race, creed, or color."

There was no claim that the hospital excluded plaintiffs as a means of deriving a profit itself from circumcisions performed in the hospital, or that plaintiffs sought to make a profit (84 N.Y. Supp. 2d 61).

PROBLEM: When a statute defines acts that shall constitute "medical practice," requiring the practitioner to secure a license, is an accusation of illegal practice valid if it does not specify one or more of those acts, and does not follow the statutory language?

COURT'S ANSWER: No.

A leading decision on this point was rendered by the Michigan Supreme Court.

The defendant was convicted of having unlawfully practiced medicine without a license in violation of specified statutes. The conviction was set aside by the Supreme Court.

The court said that the legislature's catalogue of acts constituting medical practice precluded a general charge of "practicing medicine," which might include innocent relief of suffering not falling within that catalogue.

The court added:

The rule that in indictments and informations for offenses created by statute it is sufficient to describe the offense in the words of the statute, and that where the words of the statute are descriptive of the offense, it is safe to follow the language there used, did not apply to this case because none of the descriptive words of the statute were used in framing the charge (196 Mich. 36, 162 N.W. 943).

PROBLEM: Without examining the patient or checking her medical history a Massachusetts physician administered a narcotic drug to relieve painless nausea. Was he liable for damages to the patient or her husband because of malpractice consisting of inducing drug addiction?

COURT'S ANSWER: Yes.

A Massachusetts statute permits a doctor to personally administer narcotic drugs when, in good faith and legitimate practice, he deems them necessary to alleviate pain or disease. The court said that this statute exempts physicians, on the conditions

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stated, from *penal* prohibitions as to selling and distributing narcotics but not from *civil* liability.

As to the patient's right to damages, the Massachusetts Supreme Judicial Court concluded: "This decision rests upon evidence of improper and unprofessional conduct on the part of the defendant leading to addiction. Nothing contained herein need cause anxiety to an honest physician who administers narcotics to a patient 'according to the prevailing standards of medical practice.'"

The court's conclusion that the patient's husband could join his wife in the suit for damages rested upon a Massachusetts statute which permits a husband to join in a personal injury suit brought by his wife, if he has incurred medical expenses on account of such injuries.

Said the court:

Malpractice by a physician may compel a husband or parent to incur medical expenses for a wife or child. Therefore "personal injuries" should, whenever reasonably possible, be construed to include the injurious effect of malpractice upon the health of the wife or child. At least where the harm resulted from the administration by the defendant to the wife of that which in effect was a poison, it can be fairly held within the authority of a number of decisions that the action is "for personal injuries."

The court also decided that although right of the husband to maintain a *separate* suit to collect damages sustained by him through expenditures for medical expenses caused by his wife becoming a drug addict was barred by lapse of time, that did not prevent his *joining as coplaintiff* in his wife's suit, which was brought before his claim was outlawed (81 N. E. 2d 38).

¶Although this decision turned upon Massachusetts statutes, the opinion is apt to influence courts in other states where similar legal rules apply.—A.L.H.S.

Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, *84 South Tenth Street, Minneapolis 3, Minnesota.*

QUESTION: What can be done for black hairy tongue due to yeast? I have had a man sixty-five years old under treatment for the past six months, but have not been able to eradicate this condition.

M.D., Utah

ANSWER: *By Consultant in Dermatology.* If the condition in this case is definitely due to infection with a yeast, it would be more satisfactory if we knew the nature of the organism incriminated. In most instances it has not been possible to cultivate the organism, and the cause is not known with certainty. In general there is no particular reason for treating this condition since it causes no discomfort and is of no concern to the patient after he has been told of its lack of significance. One should particularly emphasize that the condition does not predispose to cancer.

QUESTION: What are the pulmonary manifestations of beryllium poisoning?

M.D., Michigan

ANSWER: *By Consultant in Internal Medicine.* Exposure to beryllium dust or fumes may result in a chronic granulomatous sarcoid disease of the lungs or an acute form of chemical pneumonitis. Complaints develop insidiously and include shortness of breath, cough which is often nonproductive, and, occasionally, chest pain.

Findings on chest examination depend upon the relative amount and distribution of emphysema and consolidation. Emphysema may cause dyspnea, cyanosis, and clubbing of fingers.

Roentgenographic changes become well established in about two months. The appearance is either one of a fine miliary stippling or of scattered nodules, some confluent. Hilus nodes are enlarged and signs of emphysema may be observed. Pneumonia is common and may confuse radiologic interpretation.

Microscopically the lesion is a granulomatous proliferation of tissue cells in the alveolar walls, frequently with central necrosis resembling a tubercle.

QUESTION: Can sodium pentothal be used for a cesarean section?

M.D., Mississippi

ANSWER: *By Consultant in Obstetrics.* Since sodium pentothal has a narcotizing effect upon both the baby and mother, its use should be limited to the induction of general anesthesia or, preferably, it should be employed as a supplement to local infiltration anesthesia. A commonly used and safe procedure is local infiltration anesthesia until the time of uterine incision and then sodium pentothal intravenously for the remainder of the operation.

The New Oral Treatment for

New Concept

Psoriasis and neurodermatitis are treated systemically in a new therapy developed clinically by Perlman[1].

The medication used is a refined grade of undecylenic acid specifically selected for oral administration. Preliminary reports on clinical usage show definite response in a majority of the cases treated.

Why and how this new form of undecylenic acid works is not yet known. It is an odd-numbered carbon atom unsaturated straight chain fatty acid, and may play an important role in abnormalities in fatty acid metabolism.

Description

The undecylenic acid used by Perlman and others for their cases is now available under the name of Declid Undecylenic Acid Capsules.

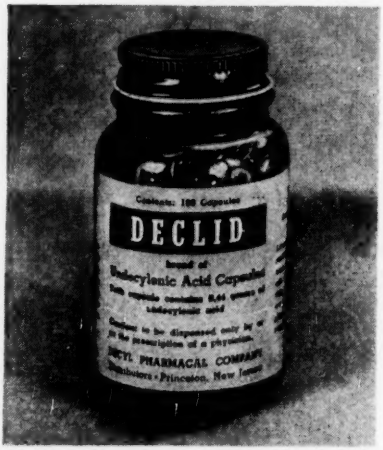
It must be emphasized that all the clinical work reported has exclusively employed only this particular grade of undecylenic acid. Ordinary commercially available undecylenic acid supplied for *external uses* is not recommended, since its possible effects when taken internally are unknown.

Declid Undecylenic Acid is supplied in soft gelatin capsules, 0.44 g. Uncapsulated, the acid is an oily, water-insoluble liquid with a fatty odor and bitter taste.

Clinical Results

Favorable responses in 25 cases of psoriasis and neurodermatitis are reported by Perlman[1].

In the cases reported so far, these improvements have been noted in varying degree in the different patients: 1. Subsidence of itching. 2. Complete or partial disappearance of lesions. 3. The probable prevention of recurrence by maintenance dosage.



Declid Undecylenic Acid Capsules, 0.44g. each, are supplied in bottles of 100.

In cases of psoriasis associated with arthropathies, Perlman[2] noted in a preliminary report that arthritic pains diminished or disappeared following oral undecylenic acid treat-

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DECLID UNDE

Psoriasis and Neurodermatitis

ment. He has found relief and improvement from symptoms in 6 cases of arthritis and bursitis not complicated by psoriasis and urges further research by others.

Tolerability

Declid Undecylenic Acid has been administered in large daily dosages over long periods without severe side reactions or toxic symptoms.

After taking Undecylenic Acid, some patients complain of a bitter taste in the mouth, mild nausea, belching or dyspepsia. These are relieved by antacids. Increased bowel activity is sometimes noted. When justified, reduced dosage or temporary cessation of treatment is advised. These side effects, in most cases, do not reappear when full dosage is resumed.

Dosage

Declid Undecylenic Acid is not a fast-acting drug. Quick response should not be expected. The optimum dosage has not been determined. The physician must evaluate each case and adjust the dosage to the response.

The capsules should be taken between meals — *not* on a full stomach. Suggested dosage schedule. *First week:* Four Declid Capsules 3 times daily; *Second week:* 6 Capsules 3 times daily; *After second week:* 8 to 10 Capsules 3 times daily if needed and continued for several months or until complete disappearance of lesions. Tolerability is enhanced by taking the capsules with a carbonated beverage, water or ginger ale.

If high dosages are taken over long periods, frequent urinalyses and blood counts are recommended.

Adjunctive Therapy

In some cases the response to Declid Undecylenic Acid has been accelerated by external use of a medicated ointment, such as ammoniated mercury 3% and salicylic acid 3% in anhydrous lanolin-petrolatum base.

Contraindications

Oral therapy with Declid Undecylenic Acid is new, and much is still unknown about its effect on metabolism. Therefore, *it should be administered with caution,* and not to debilitated, diabetic or hypertensive patients, or those with coronary or gall bladder symptoms.

REFERENCES

1. Perlman, H. H.: Undecylenic Acid Given Orally in Psoriasis and Neurodermatitis, J.A.M.A. 139:444 (Feb. 12) 1949.

2. Perlman, H. H.: Undecylenic Acid by Mouth in the Treatment of Arthritis and Bursitis, Urol. & Cutan. Rev. (Feb.) 1949, P. 103.

Caution

Declid Undecylenic Acid is to be dispensed only by or on the prescription of a physician. Literature available on request.

DECYL PHARMACAL CO. • *DISTRIBUTORS* • PRINCETON, N. J.

CYLENIC ACID

QUESTION: I have been advised by several lay sources of a new vaccine being used in treatment of pompholyx, a vesicular eruption found on the dorsum of the hands. I have considered such conditions as most commonly a neurodermatitis and frequently secondary to a dermaphytosis of the feet. In any event, varied and sundry means of therapy yield only semifavorable results. Can you give me any information?

M.D., Kansas

ANSWER: *By Consultant in Dermatology.* The vaccine treatment has been recommended recently but certainly is to be regarded as on an experimental basis. I have no knowledge of its effectiveness and no particular desire to try that form of treatment. I, too, think the condition is usually a manifestation of neurodermatitis, and perhaps one can well use the title dyshidrosiform eczema or neurodermatitis. In a smaller number of instances the eruption is an id eruption, secondary to mycotic infection of the feet or anogenital region. I agree that the usual methods of treatment cannot be completely depended upon.

QUESTION: What is the dosage schedule in the quinine-pentaquine therapy of malaria? What reactions must be watched for and guarded against in this treatment?

M.D., Pennsylvania

ANSWER: *By Consultant in Parasitology.* Administer a dose of 60 mg. base of pentaquine and 2.0 gm. quinine concurrently every four hours for fourteen days. Although pentaquine is only one-half to three-fourths as toxic for man as is plasmochin, it must be given under the direct supervision of a physician. Precaution is necessary because cyanosis and a drop in the red blood cell count may develop in individuals who are sensitive to pentaquine.

PAZILLIN is a uniform suspension of crystalline procaine penicillin G, 300,000 units/cc., in sesame oil and aluminum monostearate, and is stable for 1 year without refrigeration.

Single-injection, 4-day systemic penicillin therapy for infections due to penicillin-sensitive organisms.

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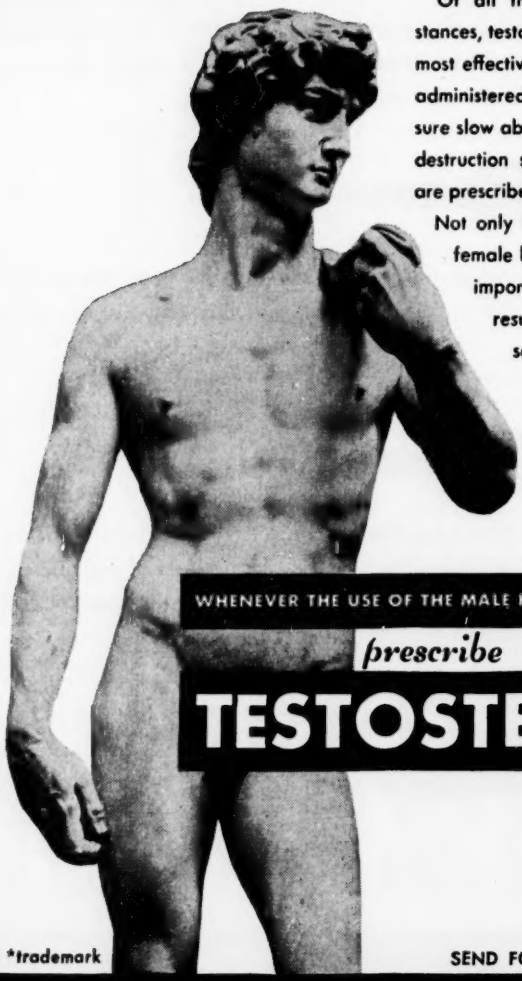
Clinical Application



Of all the known androgenic substances, testosterone is recognized as the most effective; particularly is this true if administered under conditions that assure slow absorption and preclude rapid destruction such as when Membrettes* are prescribed for transmucosal therapy. Not only in the male but also in the female have androgens assumed an important role in recent years. The results obtained have been so satisfactory that the use of free testosterone is becoming increasingly widespread.

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AQUEOUS SUSPENSION	MEMBRETTES*	PELLETS
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Effect of Hormones on Rheumatoid Arthritis

PHILIP S. HENCH, M.D., EDWARD C. KENDALL, D.Sc., CHARLES H. SLOCUMB, M.D., AND HOWARD F. POLLEY, M.D.*

Mayo Clinic, Rochester, Minn.

ACTIVITY of arthritis may be curbed by periodic injection of a biologic compound, much as diabetes is controlled by insulin.

Articular, muscular, and other symptoms were lessened and sedimentation rates were reduced for each of 16 patients with severe rheumatoid arthritis during treatment with adrenal or pituitary hormones. Either the adrenal cortical hormone, 17-hydroxy-11-dehydrocorticosterone (compound E), or the pituitary adrenocorticotropic hormone, ACTH, was injected intramuscularly daily. When injections were discontinued, symptoms and signs of rheumatoid arthritis usually, but not always, returned or increased.

Remission of arthritis during pregnancy and jaundice provided Philip S. Hench, M.D., Edward C. Kendall, D.Sc., Charles H. Slocumb, M.D., and Howard F. Polley, M.D., with the first clue that a compound normal to the body, probably an adrenal hormone, contained an antirheumatic substance.

Compound E became available in September 1948. The first cases treated received 100 mg. of compound E acetate daily. Later, the dosage scheme was revised to give 300 mg. on the first day and 100 mg. daily thereafter.

Analgesic agents, physical therapy, and other remedies that may have been employed are stopped several days or weeks before compound E is given. Unless disabled, patients are kept out of bed.

Improvement is usually greatest within seven to fourteen days. However, 75 to 100 mg. daily is required to prevent articular flare-ups and rise in sedimentation rate.

Muscular and articular stiffness is diminished promptly and often completely. Tenderness and pain on motion lessen and then articular swellings subside. The patient gains appetite, strength, and a sense of well being.

Toxic reactions are slight. Occasional epigastric pain may be relieved by short interruption of treatment. Transient edema may disappear spontaneously or when the dose of hormone is reduced or supplemented by oral potassium nitrate. The effects of prolonged administration of compound E have not been determined.

Because of exigencies of manufacture, no supplies of compound E will be available for treatment or additional research until sometime in 1950. Even then supplies may be exceedingly small.

* The effect of a hormone of the adrenal cortex (17-hydroxy-11-dehydrocorticosterone: compound E) and of pituitary adrenocorticotropic hormone on rheumatoid arthritis. Proc. Staff Meet., Mayo Clin. 24:181-197, 1949.

Pulmonary Tuberculosis of Lower Lobes

EMIL ROTHSTEIN, M.D.*
U.S. Veterans Administration Hospital, Wood, Wis.

DIAGNOSIS and treatment are difficult when tuberculosis is confined to lower lobes. When pulmonary lesions of any kind are slow to resolve, sputum and gastric washings should be examined repeatedly by smear and culture and several roentgenograms made in lateral and oblique positions to show the entire left lower lobe.

Half the cases studied by Emil Rothstein, M.D., had been disregarded or completely overlooked for weeks or years, despite the fact that lesions had often been noted on radiograms. None of the patients was benefited by pneumothorax.

In a tuberculosis unit of 430 beds, 48 cases involved only the lower lobes when the first roentgenograms were made. Ages of the affected group averaged thirty-two years against forty-one for other patients. Before the disease was identified several cases had become incurable.

The most common error is to consider infiltration with or without a cavity as nontuberculous. Because of site, the lesion is usually mistaken for slowly resolving virus pneumonitis of no significance. Bronchiectasis or tumor may be suspected.

Tuberculous cavities often form in the apex of a lower lobe and in the posteroanterior plane are projected into the hilar region, where small lesions are frequently camouflaged by the annular shadows of blood vessels. In some instances the cavity is partly or entirely hidden by the heart. A 4-cm. defect may be so well covered that the chest is considered normal except for cardiac shift to the left.

In the ordinary left oblique position, the lesion may be concealed by the spine. A left anterior oblique roentgenogram should be made at an angle only 5, 10, or 15° from the posteroanterior axis. The left cardiac border is thus superimposed on the left side of the spine while the retrocardiac field, including all of the left lower lobe, is thrown into clear vision. Preliminary fluoroscopy is helpful.

When first observed, lesions were equally divided between right and left lower lobe and rarely bilateral. Over half were in the upper parts of the lobes. About 60% were cavitary, 20% predominantly infiltrative, and 18% pneumonic. Lateral views of cavities apparently in the hilus generally revealed a posterior defect overlying the spine.

Bronchial tuberculosis was present in 75% of cases, in contrast to 14% for patients with upper lobe infection. Involvement may be shown by the behavior of a tension cavity, a bronchoscopic view of stenosis or severe tracheobronchitis, or roentgen signs of atelectasis before or immediately after induction of pneumothorax.

Almost the entire range of phthisic

* Pulmonary tuberculosis involving the lower lobes. Am. Rev. Tuberc. 59:39-49, 1949.

treatment was applied, yet no ideal regimen was discovered. The best conservative method is a short period of bed rest followed by crushing of the phrenic nerve and pneumoperitoneum. If conservative measures fail, cavernostomy or resections may be supplemented by streptomycin.

Pneumothorax was done in 16 cases. The usual results were atelectasis, pleural effusion, persistent cavitation, and inability of the lung to reexpand.

Prognosis for lower lobe involvement is apparently the same as for tuberculosis of similar extent in the upper lung fields. Inherent resistance to infection was not remarkably low in the cases observed. Indifferent results of treatment are due to such factors as the high rate of bronchial disease, inefficiency of pneumothorax, and the surgeon's reluctance to perform thoracoplasty when upper lobes are not diseased.

Potassium Depletion by Vomiting

SAMUEL BELLET, M.D., CARL S. NADLER, M.D., PETER C. GAZES, M.D., AND MARY LANNING *

WHEN serum potassium is lowered by vomiting, the deficit should be replaced promptly to prevent serious respiratory and circulatory disturbance. With alkalosis, a solution containing sodium chloride and potassium chloride is given; for acidosis, sodium bicarbonate is added.

When feasible, restorative fluids are administered by mouth, otherwise by hypodermoclysis. The painful intravenous method may be used during diabetic acidosis and shock.

Several cases of intestinal obstruction depleting both cellular and serum potassium were observed by Samuel Bellet, M.D., Carl S. Nadler, M.D., Peter C. Gazes, M.D., and Mary Lanning of the University of Pennsylvania, Philadelphia. Muscles are weakened and the accessory muscles of respiration may be paralyzed by hypopotassemia. Possible cardiac effects are dilatation, systolic apical murmur, and ectopic rhythm. Blood pressure may drop.

In electrocardiograms the QT interval may be lengthened, ST segment depressed, and T waves lowered or inverted. U waves are frequently present. The changes suggest severe myocardial abnormality.

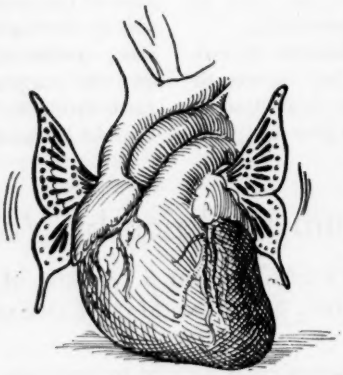
Potassium chloride in the form of a 1.14% solution was given twelve times in 10 cases. From 100 to 700 cc. was injected during periods of one-half to two and one-half hours. Blood pressure frequently rose 30 to 40 mm. and electrocardiographic irregularities disappeared.

* The effect of vomiting due to intestinal obstruction on the serum potassium. Gastroenterology 12:49-56, 1949.

Quinidine in Auricular Fibrillation

HOWARD B. BURCHELL, M.D.*
Mayo Clinic, Rochester, Minn.

AFTER twenty-five years of study, the efficacy of quinidine to restore rhythm in auricular fibrillation is still in dispute. Meanwhile the drug's value has been definitely established in ventricular tachycardia and in many cases of paroxysmal tachycardia and extrasystolic arrhythmia.



Discrimination in choice of patients for quinidine therapy is the crux of the problem in auricular fibrillation, believes Howard B. Burchell, M.D. The answers to the following questions may clarify selection:

In which cases does quinidine most often restore normal rhythm? Patients with hearts nearest to normal, anatomically and functionally, are the best subjects. These include cases of auricular fibrillation persisting after relief of hyperthyroidism or occurring in apparently healthy hearts formerly subject to paroxysmal auricular fibrillation, and cases in which fibrillation is the only sign of probable arteriosclerotic heart disease.

Which cases maintai normal rhythm? As a rule, those that most easily revert to normal. Recurrence of fibrillation is likely with extreme or aneurysmal dilation of the atria or with persistent heart failure.

Is circulatory status increased? How do results compare with those of digitalis therapy? Most patients have no greater increase in cardiac efficiency from quinidine than from digitalis. For others, restoration of normal rhythm may be followed by improved exercise tolerance and well-being.

In this second category are included patients with arteriosclerotic heart disease whose cardiac work is limited by the rapid irregular ventricular rate even with digitalis therapy; patients whose circulation is jeopardized by pulmonary embolism; and a few patients with valvular disease in which intractable failure is phenomenally compensated.

Restoration of normal rhythm initiates or aggravates heart failure in a few cases.

What are the dangers of quinidine therapy? Sudden deaths occur as often as once in 30 severe cases, usually with cardiac enlargement and failure; mortality bears no relation to amount of quinidine administered.

Peripheral embolism is likely to be initiated by restoration of rhythm in

* Quinidine therapy. J. Iowa M. Soc. 39:103, 1949.

patients with recent or impending auricular thrombus. Severe reactions such as circulatory collapse, with or without pronounced tachycardia or asystole, occasionally occur.

What are contraindications to quinidine? In general, quinidine should not be given in valvular disease with long-standing atrial fibrillation controlled by digitalis; hyperthyroidism; extreme cardiac enlargement and congestive failure especially with slow ventricular rates; complete heart block; and anginal pain relieved by onset of fibrillation.

What are indications for quinidine? Quinidine is advisable in auricular fibrillation without valvular disease or above contraindications; when repeated emboli occur without other contraindications; occasionally in progressive failure associated with ventricular tachycardia or extreme heart consciousness.

What are best methods of administration? Either continuous or intermittent dosage is effective. Dosage should be increased only when a physician is available in case of emergency.

Premedication with digitalis is indicated when the heart has previously failed. Digitalis therapy should be interrupted during large quinidine dosage to prevent confusion of the clinical course.

When emboli have been noted or decompensation is imminent, premedication with dicumarol for a week to ten days is advisable.

PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA is usually stopped in thirty-five to seventy seconds by rapid intravenous injection of neosynephrine. Resultant vasoconstriction raises blood pressure and produces reflex cardiac inhibition by effects in the carotid sinuses and aortic arch. William B. Youmans, M.D., Morton J. Goodman, M.D., and Jarvis Gould, M.D., of the University of Oregon, Portland, inject a trial dose of 0.5 mg. in twenty to thirty seconds. If tachycardia does not subside, larger doses are given when blood pressure becomes normal, usually in about ten minutes. Most attacks are ended by 1 mg. or less.

Am. Heart J. 37:359-373, 1949.

ANAL DILATATION FOR CONSTIPATION may be effective if the anal sphincter is spastic or bowel movement is impeded by rectal stenosis, hemorrhoidal complications, irregular habits, or neuropsychogenic factors. For mechanical dilatation M. D. Finkel, M.D., and A. J. Levine, M.D., of Chicago employ dilators in four sizes, the smallest 1.3 by 7.5 cm., the largest 2.8 by 9.5 cm. The patient is instructed to use them fifteen minutes daily. Each size is used in progression until insertion is easy. Usually a week or two is required with each size.

Journal-Lancet 68:467-468, 1948.

Reactions to Penicillin

MILTON D. FELDMAN, M.D.*
University of Cincinnati

PENICILLIN may be highly sensitizing and should therefore never be used for insignificant infection. Reactions to the drug include contact dermatitis or skin wheal and may resemble those from serum. Erythemato-vesicular eruptions and Arthus reactions are also observed.

In spite of previous severe effects, however, penicillin can sometimes be given again without trouble. Spontaneous desensitization may occur.

To avoid and treat unfavorable side effects from the antibiotic, Milton D. Feldman, M.D., gives the following advice:

PREVENTION OF REACTION

► **Reserve penicillin for conditions in which the organism is penicillin-sensitive. Inquire about previous use of penicillin and whether a reaction occurred.**
- A reaction may not recur on reexposure.
- Previous exposure may have induced a state of hypersensitivity.

► **Inquire about previous fungous infections and id type reactions.**
- Dermatomycosis predisposes to sensitization.
- Treat existent fungous infections.

► **If hypersensitivity is suspected, do a skin test.**
- Patch skin test for epidermal sensitivity.
- Intracutaneous tests for dermal sensitivity are often unreliable indicators of toleration.

► **Do not apply topical penicillin for more than five or seven days and discontinue at first sign of reaction.**
- Prolonged use increases rate of epidermal sensitization.

► **Protect the skin from contact with penicillin, especially in handling.**
- Penicillin dermatitis is an occupational disease of physicians and nurses.
- Use closed technic in handling syringes.
- Wash hands well after exposure.

► **Penicillin in oil and beeswax should be injected intramuscularly.**
- Subcutaneous injection predisposes to local tissue sensitization.
- Prefer procaine penicillin G mixtures. Watch for procaine intoxication in children, being careful about dosage. Patch skin test to avoid reactions from procaine sensitivity in persons suspected of being procaine sensitive.

► **When a patient is hypersensitive, desensitization can be attempted with gradually increasing doses of penicillin.**
- Desensitize by injections; oral tablets are less suitable.

TREATMENT OF REACTION

► **When reactions occur, discontinue treatment with penicillin unless there is a critical need for it.**
- This precaution applies especially to contact dermatitis, generalized erythemato-vesicular eruptions, and reactions resembling immediate serum sickness.
- Give therapeutic doses of an antihistaminic drug.

* Sensitization to penicillin: the types of reactions; therapy and prevention. Ohio State M. J. 45:131-135, 1949.

► Intravenous benadryl may allay severe reactions without interruption of therapy.

► Try other symptomatic dermatologic and systemic therapy.

Intravenous calcium, nicotinic acid, and procaine (caution!).

► When the symptoms subside, give an intramuscular test dose of 1,000 units of another brand of penicillin.

Have epinephrine or intravenous benadryl at hand.

Continue with oral antihistamines; change antihistamines if no response occurs from one type in four to five days.

► If no reaction to 1,000 units of penicillin occurs in four hours, give 10,000 units; increase dosage by 10,000 to 20,000 units every four hours if the patient remains asymptomatic.

Full dosage can often be resumed.

► If reactions recur, increase the antihistamine to the effective level.

In some patients, the antihistamine can be discontinued.

► During trial administration do not use penicillin in oil and beeswax or procaine penicillin because of slow absorption of these preparations.

In case a reaction occurs, rapid excretion of penicillin is desired.

Folic Acid Antagonists for Leukemia

WILLIAM DAMESHEK, M.D.*

ACUTE and subacute leukemia of adults and children improve in about one-third of cases under treatment with aminopterin or other folic acid antagonists. Results are best with relatively subacute cases of lymphoblastic or myeloblastic type.

Though temporarily suppressed, acute leukemia continues even with maintenance therapy. The disease and drug reactions finally prevail and death occurs.

William Dameshek, M.D., of Tufts College, Medford, Mass., observed 9 remissions of two to eight and one-half months. Symptoms recede, lymph nodes, spleen, and liver shrink, and the bleeding tendency disappears. Red cells multiply, leukocyte count becomes relatively normal, platelets increase, and the marrow condition improves.

Therapeutic doses cause toxic reactions, sometimes with a very small margin of safety. Ulceration of mucous membranes and tongue, nausea, diarrhea, and purpura may occur.

Compounds such as a-methopterin and amino-an-fol are less toxic than aminopterin but also less effective. A methylated product, a-ninopterin, appears to be more potent and less harmful.

The drugs are injected intramuscularly until a toxic or pronounced blood reaction occurs, then stopped. When toxicity subsides, a maintenance dose is given orally or parenterally daily or every other day.

* The use of folic acid antagonists in the treatment of acute and subacute leukemia. Blood 4:168-171, 1949.

Hiatus Hernia Operation

K. Alvin Merendino, M.D.
University of Washington, Seattle
R. L. Varco, M.D., and Owen H. Wangensteen, M.D.*
University of Minnesota, Minneapolis

To prevent recurrence of hiatus hernia, the esophagus should be moved forward and to the left after repair of the defect, instead of being replaced against the spine. The diaphragm is then closed posteriorly and the stomach fastened to the new orifice with nonabsorbable sutures.

In performing the operation, the transthoracic approach is preferred by K. Alvin Merendino, M.D., R. L. Varco, M.D., and Owen H. Wangensteen, M.D., although an abdominal or combined incision is used when abdominal lesions are suspected. No postoperative herniation has taken place in 13 cases observed five months to three years.

A rather large esophageal opening through the diaphragm is not uncommon, especially in women over the age of forty years. Herniation of the stomach around or with the attached end of esophagus is usually due to increased intraabdominal pressure from obesity, multiple pregnancy, abdominal tumor, or ascites. Symptoms may be gastric, cardiac, respiratory, or combined.

The condition is usually recognized by radiology, since physical examination reveals little. Several prone and supine views should be obtained because organs may revert to normal relations with erect posture. Occasionally the hernia is purely incidental and the cause of symptoms must be sought elsewhere.

Unless adhesions, volvulus, or a more serious esophageal disorder is suspected, conservative therapy should be attempted. Weight loss alone may be enough. A bland diet may be taken in frequent small feedings; antacids, antispasmodics, and sedatives are given. Constipation and flatulence should be overcome. Rest and upright position after meals and sleeping with thorax slightly raised increase comfort. Acute symptoms may be relieved by nitroglycerin taken before eating and retiring.

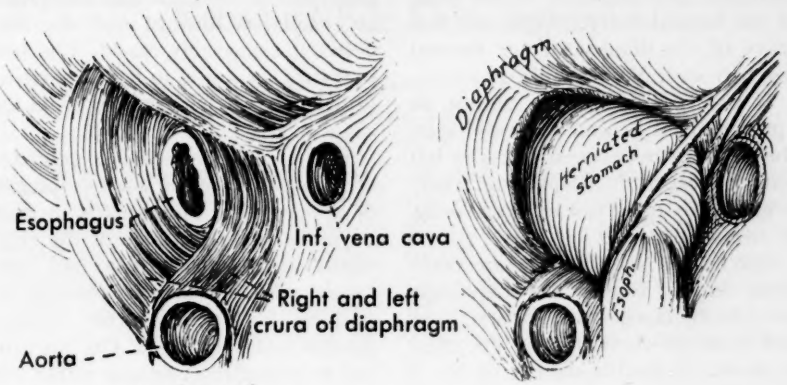
If medical treatment is inadequate, operation is performed. An intratracheal tube with inflatable cuff is used in all cases and suction applied through a duodenal tube before anesthesia and throughout the operation. Cyclopropane or pentothal anesthesia with curare is employed.

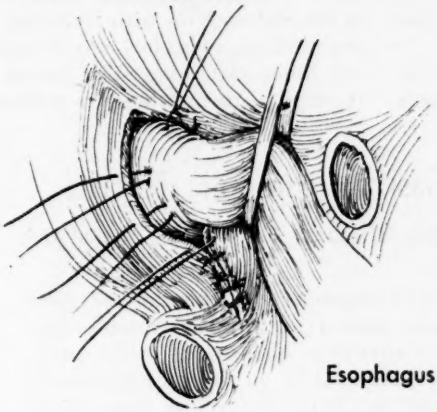
With transthoracic technic, the pleural cavity is entered through an oblique incision over the ninth intercostal space and the phrenic nerve crushed. The hernial sac is partially excised and the edge of the hernial ring freshened.

The stomach and esophagus are

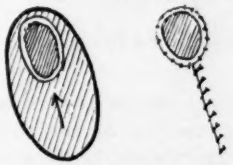
* Displacement of the esophagus into a new diaphragmatic orifice in the repair of para-esophageal and esophageal hiatus hernia. Ann. Surg. 129:185-197, 1949.

CLOSURE OF DIAPHRAGMATIC DEFECT

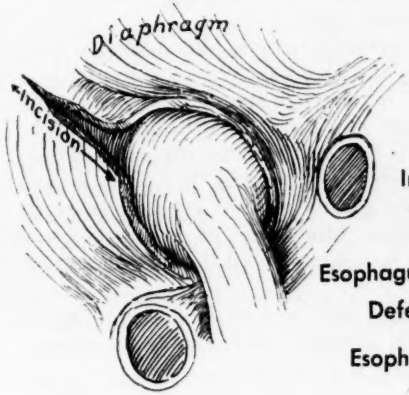




Sketches represent anatomy as seen looking down upon the diaphragm from behind.



Esophagus moved anterolaterally in defect



Esophagus moved to new location

mobilized and displaced to the front of the hernial defect. Right and left crura of the diaphragm are sutured together with No. 000 silk.

If tissues are poor or cannot be approximated behind the esophagus, the opening is enlarged into the left anterior leaf of the diaphragm, where firm healthy tissue can be closed snugly around the tube.

Stitches of No. 0000 silk are made from the free edge of the diaphragm to the esophagogastric junction, preferably on the stomach side. The chest is closed by double strands of No. 0 chromic catgut and interrupted fine silk.

The abdominal approach requires a subcostal incision into the lesser omental sac. Stomach and esophagus are displaced forward and the rear defect is completely closed. The hernial ring is sutured to the upper part of the stomach, with care to avoid the vagus nerve.

When splenic disease is probable or lesions involve the lower esophagus or upper end of the stomach, incision begins at the right edge of the right rectus abdominis muscle and continues obliquely upward, crossing the midline halfway between xiphoid process and umbilicus. The opening can be extended at need to either side of the abdomen or, with severance of one cartilage, continued into the ninth left intercostal space. The hernia is repaired as in transthoracic technic.

Vagotomy for Gastrojejunocolic Fistula

HENRY H. FAXON, M.D., AND WILLIAM G. SCHOCH, JR., M.D.*

FOR permanent closure of gastrojejunocolic perforation by ulcer, hyperacidity of the stomach should be arrested. Transthoracic vagotomy should be done soon after abdominal repair of the fistula, in the opinion of Henry H. Faxon, M.D., of Harvard University, Boston, and William G. Schoch, Jr., M.D., of Cushing Veterans Administration Hospital, Framingham, Mass.

The best time for the second operation is just after recovery from the first, before discharge from the hospital. With gastrointestinal continuity restored the stomach is relatively free of acid for a short period, ulcer symptoms disappear, and the general health improves.

Theoretically, vagotomy could be performed by the subdiaphragmatic route at the time of the procedure for ulcer. But acute inflammation and old adhesions would greatly impede attempts to reach the esophageal hiatus from below. Moreover, the vulnerable subdiaphragmatic area could easily be contaminated during anastomosis of the transverse colon.

If vagotomy is delayed too long, ulcer may again develop. Hyperacidity returns and the condition becomes less favorable for surgery.

* Gastrojejunocolic fistula. New England J. Med. 240:81-87. 1949

Repair of Bile Duct Injury

FRANK H. LAHEY, M.D.*
Lahey Clinic, Boston

A LOGICAL plan for management of a damaged bile duct includes preservation of the sphincter of Oddi and direct mucosa-to-mucosa anastomosis.

These objects may be accomplished even when a considerable portion of the common or hepatic duct has been destroyed, explains Frank H. Lahey, M.D., in describing a technic for surgery of benign stricture of the duct. The method has been used in 43 operations and has been satisfactory during at least five years of observation at the Lahey Clinic.

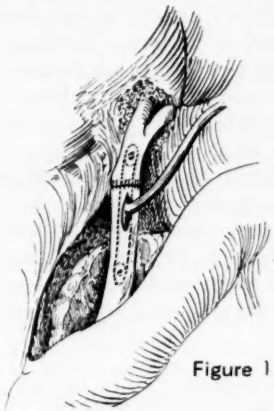


Figure 1

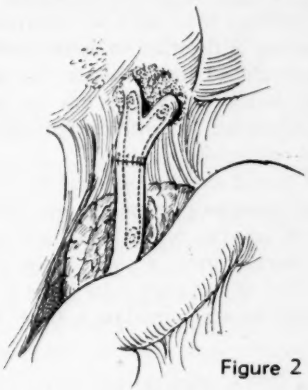


Figure 2

The duodenum is mobilized by freeing the external wall, and the pancreas is then split around the section of common duct passing through the head. No matter how many times the main channel has been incised, this part usually remains uninjured. Since any passage for fluid should be completely lined with mucous membrane, the fresh portion is mobilized for direct end-to-end anastomosis with what remains of the common or hepatic duct stump. Even if much has been destroyed, the freed end often reaches the stump without tension.

To maintain patency about the suture and allow good union of approximated mucosal surfaces, a T-tube is introduced to be left in place for a year or more. If the hepatic duct is still fairly long, the tube is introduced through a slit above the line of anastomosis; if the stump is short, a slit is made below the line (Fig. 1). The sutured region is well supported and a

* Further experiences with injured bile ducts. New England J. Med. 240:161-168, 1949.

year later is not injured or scarred by withdrawal of the tube.

In some cases the end of the hepatic duct must be dissected from the liver hilus by fulguration, and occasionally the right and left branches must be obtained for anastomosis. When little or nothing remains of the main duct, a small section of Y-tubing is introduced. A limb is placed in each hepatic branch with the stem in the mobilized common duct, and the edges are sutured about the tube (Fig. 2).

The T-tube is more satisfactory, since blockage may often be overcome by flushing with ether or saline solution introduced from outside the abdomen. Since the Y-tube has no external drainage, obstruction entails a second operation.

End-to-end anastomosis may be prevented by various complications, especially if several operations have already been done. In some cases the lower end of the duct is atrophic and too small to accommodate a tube. In others, tissues of the pancreas, common duct, and duodenal region are so greatly injured that duct ends cannot be drawn together.

The most trying complication is destruction of the common duct and separation of the right and left branch. But even with a deeply scarred right tributary, the left has been anastomosed successfully. The right hepatic lobe then atrophies after operation and the left enlarges to continue function.

During search for the upper or lower end of the duct, the portal vein may be opened by accident. Bleeding can be checked by suture, but for the time being repair must be abandoned.

Notwithstanding possible complications, repair of an obstructed bile duct should be attempted. When a passage cannot be provided, fatal cholangitis or portal cirrhosis will certainly develop. Perfect health may be restored by the trial or a hopeless condition relieved and life prolonged.

ANGULATION OF THE BOWEL from recurrent adhesions can be prevented by plication of the small intestine, although fibrous bands continue to form. Using Noble's method of plication, Jere W. Lord, Jr., M.D., Edward L. Howes, M.D., and Norman Joliffe, M.D., of New York University, New York City, achieved good results in 3 apparently intractable cases. Acute obstruction, extreme malnutrition with vitamin deficiency, constant pain, and psychoses were overcome.

All adherent loops are freed and adhesions are divided. The entire small bowel is plicated with interrupted silk or cotton sutures from the ligament of Treitz to the ileocecal valve. If no part of the intestine is removed, it may be folded into about 6 loops 12 in. long near the ileocecal valve. When a hopelessly gnarled segment is resected, each limb of the plication may be 6 or 7 in. long. All sutures are placed at the mesenteric border so that the intestinal lumen remains free and motility is normal. Because separation of adhesions is a long, painstaking procedure, the operation may take up to five and a half hours and necessitate blood transfusion of 2,500 cc. Actual plication is relatively easy and soon completed.

Ann. Surg. 129:315-322, 1949.

Postoperative Rising

JAMES B. BLODGETT, M.D.*
Peter Bent Brigham Hospital, Boston

EARLY ambulation means more than getting a person out of bed and letting him sit until someone remembers to put him back. James B. Blodgett, M.D., utilizes preoperative training, exercise before rising, and frequent walks interrupting periods in a chair.

Soon after admission to the hospital, the postoperative regimen to be employed is described to the patient in detail. He is taught the ritual of moving from supine to standing position. He practices with the urinal in order to break the inhibition against voiding in bed.

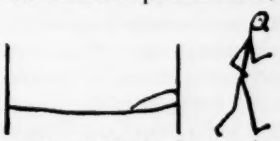
After operation the patient should be turned over at least once every two hours. When conscious, he is reminded to take one or two deep breaths every five minutes.

The legs should be exercised about twenty times in each hour. Movements consist of strong dorsiflexion and plantar flexion of feet and toes and flexion of knees and hips.

Ambulation may begin the day of the operation but usually a day later.

During all walking the patient should wear heels of the same height ordinarily worn before hospitalization. Otherwise, a woman with tight heel cords who tries to get around in flat slippers may strain the plantaris muscle and start a process leading to phlebitis of a deep leg vein.

Leaving the bed should produce the slightest possible strain on muscles in the area of incision. After being turned onto his operated side, the patient bends hips and knees, thus bringing the lower legs to the edge of the mattress. He is then assisted sidewise to a sitting position.



As he stands erect he should take deep breaths and cough several times to rid the bronchial tree of secretions. He is encouraged to walk 10 to 30 ft. and allowed to sit in a chair no longer than the time taken in straightening the bed. After another short walk he returns to bed, reversing the procedure of arising.

The routine is carried out two or three times on the first day. Because the sitting position encourages venous stasis and thrombosis, anyone wishing to stay out of bed is asked to leave the chair every five minutes and walk about.

Bathroom privileges are granted as soon as practical. About the fourth day the individual is usually able to get out of bed without help.

As an unforeseen result of early ambulation, hospital ward lavatories

* Early ambulation following surgical procedures. Bull. New York Acad. Med. 25:176-184, 1949.

are inadequate to meet the increased demand. Plans for new buildings must provide more units in relation to beds.

The nursing service is relieved of much postoperative bedside care.

Visiting between rooms is now so popular that old rules against the practice have been relaxed.

Early rising seems to promote wound healing but in the group surveyed did not appreciably change the incidence of atelectasis and phlebitis. Rates varied only 0.1% between the 504 subjects who were soon ambulant and the 680 patients who stayed in bed longer.

Vasoconstriction in Treatment of Sinusitis

A. REGINALD EVERETT, M.D.*

MAXILLARY sinusitis is effectively treated by a vasoconstricting agent in combination with a bacteria-inhibiting compound. Use of a vasoconstrictor permits a greater surface area of the mucous membrane to be exposed to the chemotherapeutic agent.

At St. Luke's Hospital, New York City, 171 cases of acute and chronic maxillary sinusitis were treated with [a] sulfathiazole, [b] penicillin, [c] sulmefrin, a preparation containing 2.5% sodium sulfathiazole and 0.125% dl-desoxyephedrine hydrochloride, or [d] tersavin, buffered tablets of the l-ephedrine salt of pencillin G.

A. Reginald Everett, M.D., noted the best results when a vasoconstricting agent was used. Tersavin and sulmefrin were about equally efficacious for acute cases, but tersavin was superior for chronic cases.

Treatment is initiated by irrigation with normal saline solution through the middle meatus with a Bowers cannula. The head is inclined away from the irrigated side to displace the solution with air and then is moved to the other side and the antrum filled with the medicated solution.

A buffered tablet of tersavin containing 30,000 units of penicillin and 9 mg. of ephedrine is dissolved in 4 or 5 cc. of distilled or sterile tap water and instilled into the antrum. Systemic chemotherapy is unnecessary.

The concentration of ephedrine is low enough to avoid undesirable secondary effects but is sufficient to relieve congestion and shrink the mucous membranes.

Acute and chronic ethmoiditis may also be effectively treated. Prolonged and gradual escape of the medicated solution into the middle meatus provides increased drainage to the ethmoid cells and prolongs contact with the bacteriostatic compound.

* Importance of vasoconstriction in the treatment of acute and chronic maxillary sinusitis. New York State J. Med. 49:417-419, 1949.

Obturator Neurectomy for Arthritis

J. ALBERT KEY, M.D., AND FRED C. REYNOLDS, M.D.*
Washington University, St. Louis

CHRONIC pain in the hip is usually caused by progressive degenerative hypertrophic arthritis. When the hip becomes established in a position of deformity, pain is aggravated by use and relieved by rest.

Conservative management comprises mainly the use of a cane or crutch along with reduction of weight, a low-fat diet, vitamin B complex in large doses, and thyroid or ovarian hormone. For severe pain, bed rest with or without traction may be indicated. Too often, however, conservative measures fail.

Operative intervention in chronic painful hips is formidable. Arthrodesis, arthroplasty, osteotomy, and cheilotomy all present difficulties and require long convalescence. Frequently hips are unstable or painful.

Obturator neurectomy, a relatively short and simple surgical procedure, may give satisfactory relief from pain.

Eighteen patients treated with unilateral section and 2 patients with bilateral section of the obturator nerves have been observed six or more months by J. Albert Key, M.D., and Fred C. Reynolds, M.D.

Results in the main were satisfactory. Three patients, 1 with Paget's disease, 1 with an old pyogenic infection, and 1 with malum coxae senilis, were not relieved of pain, and 1 patient with an old septic hip complained that the pain was made worse by the neurectomy.

Some relief was experienced by each of the other 16 patients. Nine were completely or almost completely relieved of symptoms. An increase in range of motion and improvement in gait often followed operation.

Because intrapelvic section of the obturator nerve may cause almost complete paralysis of the adductors and result in weakness, instability, and lack of endurance in the extremity, the operation should be reserved for cases in which adductor spasm or contracture, or both are judged to be a factor in the disability.

In most instances the nerve should be exposed in the thigh at the exit from the canal and the deep or posterior branch and the sensory branch to the hip sectioned.

A vertical incision 5 in. long reaching down to the level of the pubic bone is made in the lower abdominal wall along the lateral border of the rectus muscle. Superficial fascia and the anterior sheath of the rectus are incised. The rectus is retracted inward as is the pyramidalis muscle if encountered.

Areolar tissue and fat are stripped from the superior surface of the pubis. the fingers working outward and downward to the region of the obturator canal.

* Intrapelvic obturator neurectomy for the relief of chronic arthritis of the hip. Surgery 24:959-967. 1948.

The intrapelvic opening of the canal is identified and the obturator vessels and nerve palpated. The head of the table is lowered, a wide retractor introduced, and the obturator nerve stripped by blunt dissection. A section 1 in. or more long is excised and the wound closed in layers.

Obturator neurectomy may be combined with acetabuloplasty.

Splint Treatment of Clawing of Toes

WILLIAM J. WILSON, M.D.*

PATIENTS with low cord lesions and injuries of the lumbar spine often have clawing of the toes which interferes with walking and makes properly fitted shoes difficult to obtain. Beach sandals with straps to flatten the toes are likely to cause abrasions. Surgical procedures are contraindicated because of unsatisfactory healing.

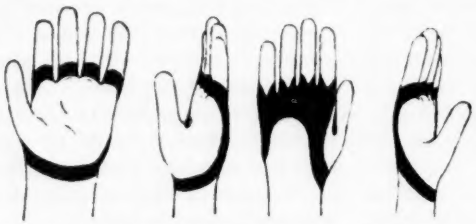


Figure 1. Splint is cut from glove in this fashion.

William J. Wilson, M.D., of Wilmington, N. C., finds that a splint cut from a rubber glove effectively maintains position without causing necrosis of the skin.

Because surgical gloves are thin and tend to roll into a cord and cause restriction, the heavier household rubber glove is used. The splint is cut as shown in Figure 1 and applied as in Figure 2. The splint can be worn comfortably under the hose in a conventional shoe, is not conspicuous, and improves the patient's walking.

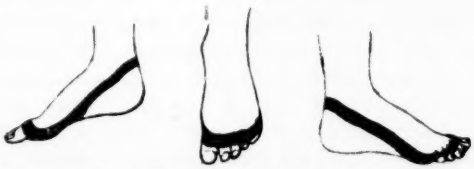
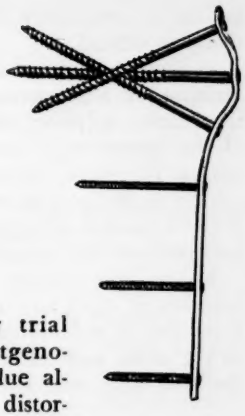


Figure 2. Toes flatten out when splint is applied.

The glove has only four fingers to accommodate five toes, but ordinarily this presents no problem. Usually when the first four toes are pulled down the extensor of the fifth toe is sufficiently relaxed to permit the toe to flatten. Often, too, the band from the fourth finger will fit over both the fourth and fifth toes.

* A simple and effective splint for use in the treatment of clawing of the toes. J. Bone & Joint Surg. 31-A:198-199, 1949.

Moe Plate for Intertrochanteric Fracture



TIMOTHY A. LAMPHIER, M.D., ARTHUR W. TROTT, M.D., AND JOSEPH H. SHORTELL, M.D.*
Lahey Clinic, Boston

RECOVERY of old people from comminuted intertrochanteric fracture is greatly hastened by internal fixation with a curved steel plate (see illustration). Screws anchored in cancellous bone hold the fragments firmly in place. The device is quickly applied and gives enough support to permit early walking with crutches.

The plate in the shape of a question mark is designed to fit any case without reshaping. To shorten operating time, Timothy A. Lamphier, M.D., Arthur W. Trott, M.D., and Joseph H. Shortell, M.D., omit roentgenography during reduction.

The Moe plate is stainless steel of the S.M.O. 18-8 group with screws of the same metal. The curved portion fits over the greater trochanter and is perforated for 3 screws. Holes are spaced 2 cm. apart and countersunk for the Venable wood type of hip screws. Angles of insertion may be slightly varied according to conditions encountered.

The straight part fitting over the femur shaft varies in length and contains 3 to 5 holes for screws of the Sherman type. Before operation the required sizes of plate and screws are estimated by trial against roentgenograms, with due allowance for distortion.

Soon after admission to the hospital, when the character of the fracture has been determined by radiography, simple Buck's extension or Russell's traction is applied. Shock is overcome by the usual methods, supportive care is given, and ability to withstand surgery is estimated. Penicillin is administered for twenty-four hours preoperatively.

Surgery is undertaken three or four days after injury. As an aid to reduction, the fracture line should be fully though not too widely exposed. For this purpose the inverted J-shaped Watson-Jones incision is most satisfactory. The tensor fascia femoris and vastus lateralis muscles are incised to the bone, and the periosteum is divided and elevated just enough to accommodate the plate.

Intertrochanteric fractures are usually reduced by traction and internal rotation combined with abduction but may require external rotation. If the surgeon is inexperienced, reduction may be verified by roentgenography.

* The use of the Moe plate in the treatment of intertrochanteric fractures. Surg., Gynec. & Obst. 87:652-660, 1948.

but in 30 consecutive cases visual inspection sufficed.

Reduction is maintained by an assistant or a mechanical aid while the plate is adjusted and the cortex of the greater trochanter drilled for screws. Direction, which corresponds to the angle of femoral neck with shaft, is gauged by a probe or clamp inserted over the capsule.

To fix the fracture and prevent rotation of the plate, the first screw is inserted in the middle or lower hole of the curve and the second through the first hole over the shaft. When fragments are solidly fixed the femur can be moved in one piece.

After severe comminution the major fragments are held in place without difficulty though small pieces may escape alignment. If a Venable screw is found to be too large at the top, a Sherman screw with special washer may be substituted.

Postoperative pain and spasm are relieved by Buck's extension applied with 5 to 10 lb. of traction for two or three days. A walker is used for early ambulation, then crutches until bones unite, usually in ten to sixteen weeks.

Varicose Veins During Pregnancy

H. O. McPheeters, M.D.*

Rapid development of troublesome varicosities late in the first trimester and occasionally in the second trimester of pregnancy should be looked for and treated by the patient's attending obstetrician.

Symptoms directly caused by the varicose veins are usually relieved completely and the varicose formation checked by judicious use of ovarian hormones. Best results may be obtained by oral administration of estinyl or hypodermic injection of progynon B or estrolutem, suggests H. O. McPheeters, M.D., of Northwestern Hospital, Minneapolis.

Headache and nausea may result if the initial oral dose is large. Medication by mouth is started with 0.05 mg. of estinyl twice daily and gradually increased to 0.05 mg. four times daily. Treatment is continued to the eighth month.

When oral administration causes nausea, parenteral therapy is indicated. Satisfactory results have been obtained with 50,000 I.U. of progynon B weekly. Varicosities of pregnancy are also relieved through the use of estrolutem (estradiol 20,000 I.U.—progesterone 10 mg.) hypodermically.

All patients should wear supportive bandages on the legs at all times.

* The value of estrogen therapy in the treatment of varicose veins complicating pregnancy. Journal-Lancet 69:2-5, 1949.

Diagnosis of Ectopic Pregnancy

J. S. MACVINE, M.B., AND D. H. LEES, M.B.*
Central Middlesex Hospital, London

ABDOMINAL PAIN, often causing vomiting and faintness, is the most reliable and constant symptom of extrauterine gestation. Other diagnostic signs may be elicited by a carefully taken history.

Analysis of 107 consecutive cases over a ten-year period by J. S. MacVine, M.B., and D. H. Lees, M.B., reveals that pelvic inflammatory disease has been overrated as a predisposing factor in ectopic pregnancy. Previous pelvic surgery and extratubal conditions altering the caliber of the lumen are more important factors.

About three-fourths of the women have anomalous bleeding and nearly the same proportion have amenorrhea. Over a third have pain in the upper arms and upper chest or pectoral region. Symptoms of bladder irritation, such as dysuria and frequency without infection, are frequent. Rectal disturbance is occasionally manifested by painful defecation, sacral pain, or diarrhea.

Because the signs of extrauterine pregnancy are related to pathologic changes, a classification like Dougal's may be helpful:

Type 1—Ovum in tube with or without slight hemorrhage into abdomen.

Type 2—Tubal rupture or abortion, diffuse intraperitoneal bleeding.

Type 3—Tubal rupture or abortion, encysted hemorrhage or hematocele.

Type 4—Advanced pregnancy.

Abdominal tenderness is noted in all phases, especially Type 2. Pain is usually elicited in the posterior or lateral fornix by vaginal examination. A tender swelling generally accompanies Type 1; generalized fullness, Type 2; and an undefined mass in the cul-de-sac, Type 3.

Softening of the cervix is almost constant with the first and third class, less important in the second. In the less acute cases examination of the breast is a great diagnostic help. The uterus is enlarged in almost two-thirds of Types 1 and 3 cases, not in Type 2.

Tubal rupture or abortion with circumscribed hemorrhage produces pallor or an appearance of illness, temperatures from 99° to 100° F., and a pulse rate of over 100 per minute. Although the abdomen may be distended, rigidity is uncommon and a tumor rarely felt except on vaginal examination.

Blood examination, pregnancy tests,

* A statistical and clinical review of 107 cases of ectopic gestation. Brit. M. J. 4597:263-266, 1949.

and curettage are too slow and elaborate for rapid diagnosis.

Ectopic gestation is likely to occur in relatively sterile women. Many have had 1 or 2 previous pregnancies ended by abortion. Appendectomy, ovariotomy, operations for ectopic gestation, and excision of tuberculous glands had been done on a number of the women.

External factors distorting the fallopian tube were noted in 22 cases. Cystic or enlarged ovaries without corpus luteum were seen fairly often. Tubes are occasionally obstructed by fimbrial or paraovarian cysts, uterine or tubal fibroid tumors, or endometrioma of the broad ligament. Hydrosalpinx, chronic appendicitis, and old tuberculous occlusion of tubes were observed in 1 case each.

A history of possible genital infection was obtained in only 7 cases.

The influence of congenital defects and tubal spasm on ectopic development is difficult to prove. External transmigration of the ovum occurred in a single case.

Immediately after diagnosis, the involved tube should be completely removed, without or with the ovary. Only essential procedures should be undertaken. In case of shock, blood transfusion is begun at once.

Intravaginal Hydrotherapy for Home Use

WALTER J. REICH, M.D., AND MITCHELL J. NECHTOW, M.D.*

WOMEN with pelvic inflammatory disease or cellulitis are benefited by intrapelvic circulation of warm water. By means of an intravaginal latex bag, therapy may now be simply done in the home.

The apparatus devised by Walter J. Reich, M.D., and Mitchell J. Nechtow, M.D., of Cook County Hospital, Chicago, requires only a source of warm water, obtainable from any ordinary faucet.

The patient lies or sits on a towel in the bathtub. The latex bag, lubricated with soap or jelly, is inserted into the vagina. The rubber tube is attached to the faucet and the water turned on. Temperature and pressure are regulated by the patient according to individual tolerance and comfort. After treatment, the bag is removed, washed with soap and water, and dried. Sterilization is unnecessary if the bag is used by only one patient.

Treatment is continued for about twenty minutes the first time, then gradually increased to an hour. Muscle relaxation, increased circulation, and decreased arterial tension are induced. Peripheral vessels dilate with subsequent decongestion of deep vessels. Increase of phagocytic leukocytes, cellular metabolism, and absorption of exudates results.

* A new simple physical method for the administration of intrapelvic heat. Am. J. Obst. & Gynec. 56:590-592, 1948.

COUGH FRACTURE IN PREGNANCY is not uncommon during the last trimester and usually occurs in the left ninth, tenth, or eleventh rib. Symptoms may suggest pleurisy. Breathing is painful and temperature and respiration may be increased. A tender spot is found on the rib and anteroposterior and oblique roentgenograms reveal the fracture. In 4 cases studied by J. W. Paulley, M.D., D. H. Lees, M.D., and A. C. Pearson, M.D., of Middlesex Hospital, England, discomfort started after a sudden sharp pain during a coughing fit. Adequate strapping brought relief. None of the women had bone fragility.

Brit. M. J. 4594:135-137, 1949.

VAGINAL AND CERVICAL INFECTIONS may be eliminated by tampons soaked in glycerite of hydrogen peroxide. The compound is a 90% solution of hydrogen peroxide dissolved in anhydrous glycerol to a dilution of 2.5% with 0.1% oxine. Effects are hygroscopic, bacteriotoxic, lethal to *Trichomonas,* and deodorant. Samuel P. Norman, M.D., and Paul P. Norman, M.D., of Malden, Mass., obtain complete remission with one treatment in most cases and in others with two. Infection recurred in only 1 of 20 cases.

Journal-Lancet 69:60-61, 1949.

DIETHYLSTILBESTROL FOR ENDOMETRIOSIS alleviates severe pain and may be given over an extended period without untoward side effects. The endometrial mass was reduced by the hormone therapy in 3 of 4 cases treated, report Lewis M. Hurxthal, M.D., and W. T. Arnold, M.D., of the Lahey Clinic, Boston. The fourth patient could not tolerate treatment. Diethylstilbestrol is given orally in daily doses of 3 to 5 mg. for twelve to eighteen months. Continued therapy is contraindicated by familial history of cancer, presence of uterine fibroids, or suspicion of cancer.

Lahey Clin. Bull. 6:38-44, 1948.

A SIMPLE TEST FOR PREGNANCY is described by Sherman S. Garrett, M.D., of Champaign, Ill., who has found the procedure accurate in more than 250 cases. Three injections of 1 mg. each of estrone in oil are given every other day. If vaginal bleeding does not occur within twenty-four hours after the third dose, the patient may be presumed to be pregnant. The first injection is made deep into a deltoid muscle; the second is made forty-eight to seventy-two hours later into the other deltoid; five days after the first injection, the third is made into the deltoid first used. Prerequisites are regular menstrual periods with current one overdue, general good health, normal pelvic findings, and no recent endocrine therapy.

Am. J. Surg. 76:261-267, 1948.

Evaluation of Hemolytic Disease of Newborn

P. L. MOLLISON, M.D., AND MARIE CUTBUSH, B.Sc.*
Postgraduate Medical School, London

SEVERITY and probable outcome of hemolytic disease may be satisfactorily assessed by determining the hemoglobin value of the umbilical cord blood.

Samples of venous or capillary blood even when taken a few hours after birth may mask anemia, since hemoglobin values are consistently higher than those of cord blood. If the cord is tied late, umbilical hemoglobin values may be misleading because of the reflux of placental blood.

Hemolysis is greatest at birth and diminishes thereafter. Whether treatment is necessary depends upon the severity of the hemolytic process. P. L. Mollison, M.D., and Marie Cutbush, B.Sc., found hemoglobin values of blood obtained with a dry syringe and needle by puncture of the umbilical vein on the placental side of the ligature a reliable index to severity of disease in each of 74 instances.

When values are more than 14.5 gm. per cent, recovery is usually spontaneous; when less than 8 gm. per cent, death is likely within twenty-four hours. Kernicterus may develop two to five days after birth in infants with intermediate values. Potentially fatal cases will almost invariably have other signs of rapid blood destruction.

Erythroblastemia is present on the first day if the hemolytic process is severe. When hemolysis is slight the number of nucleated red cells is usually within normal limits.

Hyperbilirubinemia, often present in fatal cases, is a useful aid to evaluating hemolytic disease, although the zone dividing mild and severe cases is narrow. Slightly affected infants have elevated cord plasma levels at the moment of birth. Those with severe hemolysis have bilirubin values far above the normal range. Elevated bilirubin must be interpreted with caution, however, and always in conjunction with hemoglobin values, because the newborn infant has a lowered capacity for excreting bilirubin.

The direct Coombs test for sensitization of the red cells offers a means of positive diagnosis of hemolytic disease at the time of birth. A weak reaction has some value as an indication of mild disease. Moderately strong reactions are not necessarily associated with signs of rapid blood destruction.

The amount of free Rh antibody in the infant's serum likewise appears to be poorly correlated with severity of the disease. However, the kind and titer of antibody in the mother's serum and the disease severity in the infant seem to be related. A high titer of albumin agglutinin is usually associated with severe anemia.

* Haemolytic disease of the newborn: criteria of severity. Brit. M. J. 4594:123-130, 1949.

Right- and Left-Handedness

RICHARD S. EUSTIS, M.D.*
Massachusetts General Hospital, Boston

ALL children should be taught to use paper and pencil with their right hands when first entering school. Efforts should be dropped, counsels Richard S. Eustis, M.D., if a child objects strenuously or shows signs of nervous strain, one of which may be stuttering.

Stuttering in such cases is not necessarily caused by partial shifting of the cortical speech center. The difficulty is as likely to be due to the breakdown of an inherently weak speech mechanism under the added strain.

Environment and heredity share in development of manual dexterity. Environmental effect is shown by the fact that 95% of the adult tool-using civilization use the right hand, yet half of Stone Age weapons were chipped for left-handed use and 20% of kindergarten children prefer the left hand. Other primates show no unilaterality. In early childhood the favored hand shifts at intervals, with periods of no preference.

Persisting left-handedness is explained by many theories: mendelian inheritance, temporary disablement of the right hand, imitation of left-handed siblings and parents, childhood negativism, and faulty training by parents who misinterpret use of both hands as preference for the left or who habitually hand objects to the child's left hand.

The influence of heredity on handedness is attested by Gesell's observations of the tonic neck reflex in infants. When a normal infant under twenty weeks of age turns the head to one side, the arm and leg on the same side straighten and stiffen, the opposite arm bends toward the head, and the opposite leg flexes at knee and hip. Of 10 infants whose reflexes were predominantly toward the right, all were right-handed at the end of ten years.

Of 9 with left reflexes, 4 became left- and 5 right-handed. The inherited tendency toward the left probably survives social pressure for right-handedness only when the inherited trait is strong.

Language disturbances such as motor speech delay, infantile speech, stuttering, and reading disabilities do not characterize the strongly left-handed individual, and are more frequent in partly ambidextrous persons whose cortical dominance is mixed or varying.

Changing the writing habits of an older child from right to left hand may on rare occasions be beneficial if he is strongly left in other activities, has difficulty in oral and written expression, and cooperates completely.

All left-handed writers should be carefully taught in the beginning to slant the paper down to the right and allowed to use a slight backhand slant.

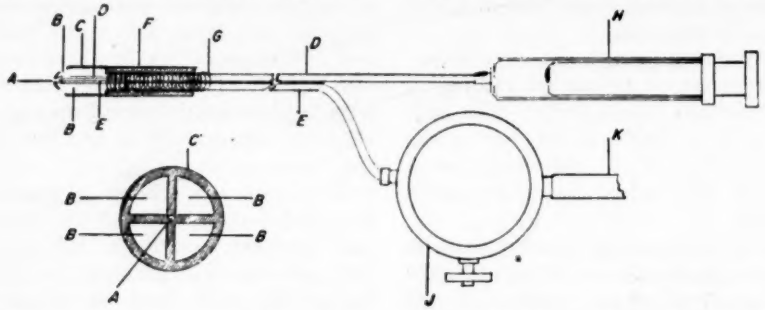
* Right- or left-handedness. New England J. Med. 240:240-253, 1949.

New Method in Rectal Roentgenography

GEORGE LEVENE, M.D.*
Boston University

DEFECTS not seen by the usual barium enema may be revealed if a thin layer of the medium is sprayed on the rectal mucosa.

George Levene, M.D., applies a mist of barium sulfate by compressed air. Since an ordinary paint-spraying equipment would build up enough pressure to burst the bowel in a few seconds, special apparatus was constructed to provide vents for escape of surplus gas.



The new device has a metal tip ½ in. long with diameter of ¼ in. (see illustration). A water suspension of barium is propelled through a central orifice of 1/100-in. diameter *(A)*. In addition, the tip has relatively large openings for return of the compressed air *(B)*. The cross section of the escape vents is 200 times the area of the spraying orifice, thus providing a large safety factor.

The walls *(C)* of the spraying tip enclose two ducts, one for barium *(D)* and the other for oxygen *(E)*. Soft rubber tubing *(F)* encases the entire assembly and offers a channel for air leaving the rectum. The catheters are surrounded by a helical spring *(G)* to prevent the anal sphincter from compressing the rubber tube and the enclosed ducts.

A syringe *(H)* contains 10 cc. of barium sulfate suspension. The oxygen catheter leads to a reduction valve *(J)* set at 2 lb. A hose connection *(K)* is attached to an oxygen tank.

Before examination the bowel must be thoroughly cleaned. The subject is placed in knee-shoulder position on the table. With gas flowing through the apparatus the tube is inserted into the bowel until the tip is well up in the sigmoid, as shown by the fluoroscopic screen.

The prone position is then assumed and the table head lowered, so that the gas introduced will rise to the distal segment of bowel and escape.

* A new method for the roentgenologic study of the rectum. Surgery 25:68-75, 1949.

The pressure in the intestines should be 0.6 oz., about 1/100 of the average bursting pressure.

As barium is forced from the syringe the spraying tip is slowly withdrawn, depositing a fine barium mist on the mucosa of rectum and anal canal. Stereoscopic films are then exposed in anteroposterior, posteroanterior, and lateral positions.

The spray technic of rectal roentgenography caused no discomfort or untoward effect in 100 persons examined. The delicate structures of the rectal mucosa are visualized in their natural state, being neither hidden nor flattened by a heavy mass of opaque barium. The rectal walls are gently separated but not distended by air. Houston's valves and the columns and crypts of Morgagni are clearly outlined.

A routine barium enema shows rectal lesions accurately in about 40% of cases, and the usual digital and proctoscopic technics may fail to reveal valvular ulcerations or other disorders.

Pyeloureteral Dilatation of Pregnancy

RALPH H. JENKINS, M.D., AND G. VAN WAGENEN, M.D.*

ATONY and dilatation of the ureters and renal pelves during gestation result from endocrine activity of the placenta rather than from purely mechanical factors causing obstruction. Although 95% of women are affected in the first pregnancy, dilatation is less severe with the second child, and unusual thereafter.

Nearly two-thirds of all urinary tract infections occur with the first or second pregnancy. If a congenital anomaly or other pathologic state is already present, the condition will be aggravated by urinary stasis. A woman should therefore have the upper urinary tract examined by intravenous urography either before conception or during the early months of the first pregnancy, state Ralph H. Jenkins, M.D., and G. van Wagenen, M.D., of Yale University, New Haven, Conn.

Although hormonal therapy is still insufficiently explored in this field, ureteral tone is reported to increase when stilbestrol is begun two days after delivery.

In Rhesus monkeys ureters also dilate in the latter part of gestation. But if the fetus is removed after hydroureter is established and the placenta remains, dilatation not only continues but progresses, although weight and size of uterine contents are much less than before the ureters enlarged. If the fetus is removed earlier, hydroureter develops and persists until the placenta is spontaneously expelled at term.

* Clinical interpretation of pyelo-ureteral dilatation of pregnancy based upon experimental studies. J. Urol. 61:217-221. 1949.

The Post-Anesthesia Room

R. Douglas Sanders, M.D., John J. Graff, M.D., James P. Aikins, M.D., and Jean B. Cooling, R.N.*

Delaware Hospital, Wilmington

Immediate postoperative treatment is best supplied by special personnel in a well-equipped room near the surgical suite. Here both routine and emergency conditions can receive expert care and the efforts of trained specialists are concentrated in a central location.

The post-anesthesia room described by R. Douglas Sanders, M.D., John J. Graff, M.D., James P. Aikins, M.D., and Jean B. Cooling, R.N., is popular with the hospital staff, patients, and families. In a period of almost six months, 1,222 cases were accepted. The basic principles of instruction have been formulated and are available to qualified persons.

Among the services offered are maintenance of a clear airway, oxygen therapy, intravenous administration of blood, plasma, and other fluids, chemotherapy, and sedation. Most of the surgical in-patients from the operating rooms are observed and treated in the special department and also the out-patients who are not fully active after anesthesia. Running water, telephone, and a call system should be supplied.

The room should be easily accessible to the surgical department. The obstetric staff has facilities elsewhere.

Equipment includes the following basic items:

Airways of all sizes, from infant to large adult.

Mouth props, i.e., wooden wedges for prying clenched jaws apart.

Suction apparatus with several catheters.

Oxygen equipment of three types: nasal catheter, demand flow, and positive pressure.

Laryngoscope and endotracheal tubes.

Intravenous apparatus with a cut-down set, needles, fluids, and plasma.

Sphygmomanometer and stethoscope.

Common drugs such as morphine and penicillin.

A record system.

The worth of the post-anesthesia service depends on the intelligence and training of the nurse in charge.

The anesthesiologist is instantly available. At the end of an operation he conducts the patient to the special room, explains the operative and anesthetic course, the expected reactions, and the treatment required.

The charge nurse then performs specific measures and routine duties, including determinations of pulse, blood pressure, and respiratory rate. She often cares for several persons at the same time. Private duty nurses attend patients under her supervision. The nurse should be competent to instruct in postoperative therapy.

The period of observation and treatment varies from fifteen minutes to four hours or more. Oxygen is freely used, not only for dyspnea but to combat shock and reduce excitement following narcosis. No visitors are admitted.

* The post-anesthesia room. Delaware State M. J. 21:14-15, 1949.

Medical Forum

Discussion of articles published in MODERN MEDICINE *is always welcome. Address all communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Repair of Injured Anal Sphincter*

TO THE EDITORS: The repair of injured anal sphincter by the use of alloy steel wire as brought out by Dr. Walter Birnbaum in his article is excellent.

I have been using steel wire for this purpose for several years with good results and without infection. When I used other suture material it always sloughed out.

My technic is a little different in that I do not use a pullout suture, but leave it permanently in place. I think his method is perhaps the best, in that he seems to get a better cosmetic effect.

CLIFFORD C. WILSON, M.D.
Kansas City

► TO THE EDITORS: Successful repair of the incontinent anal sphincter is inseparably bound to healing by first intention. Failure in most instances is due to infection of the wound because of the proximity of the sphincteroplasty to the anal orifice.

Edgar Poth has shown that the flora of the stool may be altered with sulfathaladine and sulfasuxidine to such an extent as to make this a leading factor in healing by first intention, even in the presence of constant soiling of the wound. Curtice Rosser used these drugs to secure healing by first intention in 12 out of 15 sphincteroplasties.

Dr. Walter Birnbaum suggests an ingenious method of using steel alloy wire as pull-out retention sutures in repair of the incontinent anal sphincter. Wire is admirably suited for this purpose. Its holding strength, its size, and its minimal tissue reaction make it an ideal pull-out suture. Great care should be taken that these sutures are not placed in or through the bowel wall, for fistula formation will almost certainly follow. However, the suture material is not the ultimate deciding factor in the success or failure of an anal sphincteroplasty.

If healing by primary intention has been secured, it means that the tissues have successfully repulsed the onslaught of infection or that the wound has not been sufficiently contaminated to interfere with the normal tissue repair.

It is the alteration of the flora of the stool with sulfasuxidine and sulfathaladine which obviates the contamination and allows the tissues to heal with a minimum of granulation tissue.

JOHN MCGIVNEY, M.D.
Galveston, Tex.

*MODERN MEDICINE, Mar. 1, 1949, p. 70.

► TO THE EDITORS: The most frequent cause of anal incontinence is operative sphincter trauma. The most frequent operation to be followed by such incontinence is fistulectomy. The usual cause of incontinence after sphincter incision is prolonged packing of the wound. If the wound is packed for only twenty-four hours, or not packed at all, a thin block of scar tissue will be formed as an anchorage point between the severed fibers. No incontinence results.

Although the degree of muscle atrophy and the amount of separation of the muscle ends are important factors, the general surgical procedure remains the same in all excision and suture corrective operations. The scar tissue resulting from the previous surgery is excised and the fresh wound is sutured. This may or may not be combined with an effort to discover and bring into apposition the severed muscle ends. The principle is simply that by excision of broad intervening scar tissue and closure of the fresh wound edges the severed muscle fibers will automatically be brought closer and will be united by a thinner block of scar tissue.

This is the operation described by Dr. Walter Birnbaum.

My own preference is for incision in such fashion that a radial wound results. It is of little consequence whether this wound is sutured with deeper tension sutures and skin sutures of chromic catgut or of wire alloy. The choice is merely a matter of individual preference.

If the patient is given adequate pre- and postoperative care, infection will be minimal and separation will not occur. Preoperative care involves the use of sulfaguanidine in a dosage of 0.1 gm. per kilogram of body weight, taken by mouth every eight hours day and night during the preoperative week. This drug should be continued postoperatively in the same dosage for an additional week.

At the time of surgery and each day thereafter for one week penicillin should be given intramuscularly in a dosage of 300,000 units of the aqueous procaine penicillin G.

Therefore, the question of the use of wire or catgut becomes simply a matter of adequate attention to pre- and postoperative detail and surgical technic. If a particular surgeon's incidence of postoperative infection is high, the use of wire as described may be advantageous.

ALFRED J. CANTOR, M.D.
Flushing, N. Y.

► TO THE EDITORS: My views in connection with repair of the incontinent anal canal are best expressed in the following conclusions from my article in the *Southern Medical Journal* (Oct. 1948):

If intestinal bacteriostatic agents are to be used as adjuvants to anal surgery, they should be given with the same formality as in major bowel surgery. This is not, from present information, justified in connection with routine anal procedures.

Where function is the chief consideration, as in operations upon complex fistulas, the proper use of these drugs should prove helpful.

In sphincteroplasty, where immediate and primary union of deeper layers is essential, a definite indication for their use is present.

Dr. W. B. Gabriel of London states in his recent text on rectal diseases

(Continued on page 70)

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that the chief obstacle to satisfactory plastic surgery about the anus is the ever present infection hazard. I feel that we have solved this problem by the formal administration of the sulfa drugs for a long period before the defect is closed and that, if infection can be avoided, the type of suture material is of no real consequence.

CURTICE ROSSER, M.D.
Dallas, Tex.

► TO THE EDITORS: I hasten to agree that the operation described by Dr. Birnbaum appears to be an excellent method of repairing the incontinent anal sphincter when a relatively small defect exists. Blaisdell described a two-stage repair operation for the incontinent sphincter ani in 1942. This procedure was designed to repair major defects of the sphincter. The first stage effected a sliding and transplantation of the muscle ends to convert a large defect into a small one.

The second stage is based upon the same principles described by Birnbaum and is recommended by Blaisdell as being adequate for the repair of minor sphincteric injuries in one stage. Birnbaum's procedure appears to be identical with the second stage of Blaisdell's operation except for the manner of placing the sutures. Blaisdell also recommends the use of wire, but approximates the scarified muscle ends with a buried suture. Stay sutures are used to approximate the skin and subcutaneous tissues and to give additional relaxation to the approximated muscle edges. My experience with this type of operation has been highly satisfactory and I can see no advantage in Birnbaum's modification.

It is my feeling that some type of nonabsorbable suture material is best in plastic repairs of the anal sphincter. My own experience with absorbable suture has been unsatisfactory and I no longer use it in these operations. However, Rosser, in a recent series of 15 sphincteroplasties, secured enviable results by the use of fine chromic catgut. Wire serves admirably, but my results with silk and cotton have been comparable. Therefore, I feel that the operative technic rather than the type of suture material is important.

I am in complete agreement with Rosser that adequate pre- and postoperative use of insoluble sulfonamides makes it no longer feasible to tie up the bowel or in any manner interfere with the normal bowel habit following plastic procedures.

VINCENT T. YOUNG, M.D.
Washington, D.C.

Silent Gallstones*

TO THE EDITORS: The article on silent gallstones by Drs. Mandred W. Comfort, Howard K. Gray, and James M. Wilson is a valuable contribution: further discussion is appropriate.

It is our policy to advise cholecystectomy for so-called "silent gallstones" in the good risk patient.

The solitary stone and the uniformly sized multiple cholesterol stones develop innocently as a sequel of the gallbladder's physiologic function of bile concentration. Once established, however, they can mechanically interfere with function, are a source of chronic irritation, and contribute to bacterial invasion. With stones of mixed composition and size one sus-

*MODERN MEDICINE, Feb. 1, 1949, p. 58.

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pects that infection has already occurred.

We agree that 50% or more of patients with stones will sustain no serious complication, but 40% or more will be troubled in varying degree. The crux of the problem is that we are not able to predict which patients will be the unfortunate ones who will insidiously develop symptomatic trouble, nor are we able to predict which of these will by that time have developed other constitutional disorders to impair their surgical risk.

We know that the surgical risk of cholecystectomy for chronic cholecystitis, as prescribed now by the conservative school who advise surgery only for patients who have symptoms of gallbladder disease, averages 0.5%. We have reason to believe it should be even less in the good risk patient with asymptomatic stones. On the other hand, the mortality in experienced hands is about 3% in complicated gallbladder disease (Mainzal) and has been reported as high as 12% in acute cholecystitis (Eliason and Erb).

Why then should the patient so fortunate as to have the disease discovered early be deprived of his advantage? Is it not logical to extend to patients with silent gallstones the opportunity to avail themselves of the lower mortality and lower morbidity associated with early surgical removal of the gallbladder?

We feel that the report by Comfort, Gray, and Wilson of 112 patients followed from ten to twenty-three years after coincidental gallstones were found, but not molested, at the time of laparotomy is a valuable contribution. Furthermore, we believe that the facts brought out by this followup support rather than negate our policy. The fact that 45% developed preventable distress or complications, that 5% developed jaundice, and that 24% later submitted to cholecystectomy (of whom 3 died) seems to us to support the policy of prophylactic elective cholecystectomy.

Even in certain instances when constitutional disease somewhat increases the surgical risk we still advise elective cholecystectomy. Thus in a patient with angina pectoris and heart disease, when we feel that subclinical gallbladder attacks are a trigger mechanism inciting angina, it has proven an advantage to remove the gallbladder. Likewise, in diabetes mellitus a planned elective operation is to be preferred to emergency surgery under adverse conditions. It follows, of course, that this philosophy is based upon the requirement of competent surgical ability, anesthesia, and integrated medical consultation; otherwise the quoted mortality figures would not hold.

A consideration of less importance percentage-wise but none the less serious, is the occasional carcinoma associated with gallstones. It is to be remembered that 80% of carcinomas of the gallbladder are found to have gallstones associated, usually imbedded in the carcinoma. This would seem to be more than mere coincidence. Lenz in some 500 cases of gallstones found 5% associated with carcinoma of the gallbladder. Moynihan says that 5% of gallstones are associated with carcinoma. Riedel and Evarts Graham each estimate 8%.

These percentages may be high for the physician who sees a smaller series, nevertheless, any proven increase in

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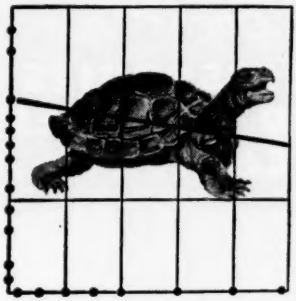

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*Thomas, E. W., et al: *J.A.M.A. 137:1517, 1948*

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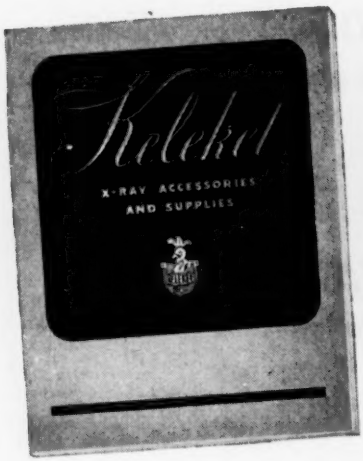

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incidence of carcinoma with gallstones is an argument for cholecystectomy. After carcinoma develops in the gallbladder, the salvage rate is practically zero. The only cure is prevention, another argument for early elective cholecystectomy.

Another equally important angle should be considered. I refer to the 55% with silent stones who do not develop trouble. Certainly they should serve as a warning to the internist and surgeon alike that demonstrated gallstones are not necessarily the sole source of a patient's complaint and that their removal may not relieve his complaint. Gallstones do not preclude other troubles nor should they lessen further clinical search to find the other troubles. While we advocate prophylactic cholecystectomy to prevent sequelae, we do not like to learn postoperatively that we have removed the gallbladder to cure unrelated disease.

There are instances when one cannot be sure, and in these the uncertainty of obtaining relief should be clearly explained to the patient before surgery. Likewise, the competent surgeon will never fail at the time of laparotomy to explore the entire abdomen for other pathology before initiating the proposed procedure. Even though he confirms the diagnosis of gallstones he has the opportunity of looking for coincidental lesions which might not be discoverable by clinical or x-ray examination or which may have been overlooked. By such practice the incidence of postcholecystectomy symptoms will be reduced correspondingly.

JOEL W. BAKER, M.D.

Seattle

► TO THE EDITORS: Silent gallstones are not a medical entity. Even though gallstones which by themselves never gave any symptomatology during the lifetime of the patient are discovered on numerous postmortems, it behooves the internist who finds them in any routine checkup to be very emphatic about having them out at the proper opportunity. No doctor can take upon himself the responsibility of leaving the stones in, when the chances are that they will dislodge and obstruct the common duct with subsequent damage to the liver and high mortality.

If immediate surgery is not feasible because of very advanced age, decompensatory cardiac diseases, or cirrhosis, the patient should have at least weekly duodenal drainage and have amyl nitrite ready for use whenever colic is impending. The diet in these cases should be of the blandest variety and noncholagogic.

In conclusion, I must state that I doubt if there is much variance of opinion among internists as to the procedure with silent gallstones.

HENRY A. MONAT, M.D.

Washington, D. C.

► TO THE EDITORS: Silent gallstones have always posed an interesting problem. In my experience, cholelithiasis which has not produced symptoms is very rare. Interested inquiry will usually reveal attacks of "gaseous" indigestion difficult to explain otherwise.

The stones are a mechanical disorder solvable only by mechanical means, i.e., surgery. It is a brilliant achievement to remove them just a week before they would give trouble

and not much less brilliant to remove them a year or ten years before they would give trouble. In weighing the factors for judgment, the probability of illness from the stones and the possibility of serious complications from them outweigh the risks of operation.

In any decision concerning an operation, two questions are always raised tacitly by the patient. "Do I *have* to have an operation?" and "When?" The existence of cholelithiasis answers the first question affirmatively. In this case, as usual, the answer to the second question is, "The sooner the better." The patient must assume responsibility for delaying operation.

T. L. HYDE, M.D.

The Dalles, Ore.

Low Thigh Amputation*

TO THE EDITORS: The technic of low thigh amputation suggested by Dr. Willian D. Holden has attraction by reason that it permits easy access to the popliteal artery and vein and the sciatic nerve in a direct manner.

It has been our custom to avoid the "awkward maneuvering" mentioned by Dr. Holden by suspending the operated extremity by a hitch around the ankle to a stand at the side and lower end of the operating table and placing sandbags under the upper thigh and tuberosity of the ischium.

The lower portion of the extremity which will be amputated is draped so that the sterile sheets cover the stand to which the foot has been tied. A sterile basin held at a proper level then lies under the amputated extremity, so that at the completion of the amputation the distal end of the extremity can be removed from the operating table by simply removing the stand and the sterile covering, leaving a second sterile sheet which had been placed at the beginning of the draping. The stump is then left so that it is elevated and easily accessible to the operating team.

We prefer the guillotine type of incision with the closure of the musculofascial layer with the one purse-string suture chromic No. 1 over the femur. I believe it should be emphasized that it is necessary to bring the sartorius and adductor muscles down to approximate the biceps and vastus externus in the closure of the muscle layer over the femur. Otherwise the adductor power of the stump is weakened, and if the retracted adductor muscles are not at the end of the stump, it will be tender and unsuitable for good fitting of a prosthesis.

JOHN C. HOWELL, M.D.

Philadelphia

► TO THE EDITORS: I agree with Dr. Holden that amputation through the lower third of the thigh is the preferred procedure for cases of arteriosclerosis. Amputation at this level has given me quite satisfactory results.

His technic of low thigh amputation also appeals to me. By coincidence I used such a technic on a case about four years ago. I was operating in a hospital where there was a shortage of help and, to save maneuvering and unnecessary handling, used a technic of similar nature. The result was quite satisfactory. I believe there is real merit in Dr. Holden's procedure.

J. S. NEVIASER, M.D.

Washington, D.C.

*MODERN MEDICINE, MAY 1, 1949, p. 58.

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Case MM-143

THE CLUE

ATTENDING M.D: We wish you to see a fifty-year-old patient who has been in the hospital for fifteen days and seems to be dying of a brain tumor. One month ago he first noticed right-sided paralysis, which has been growing worse. He was brought here because of aphasia of one day's duration. It has progressed since.

VISITING M.D: Is he right-handed?

ATTENDING M.D: Yes.

VISITING M.D: Please go on.

ATTENDING M.D: The only additional feature is that he has been stuporous, foggy, and confused for the past week. Yesterday his bowel and bladder were incontinent.

VISITING M.D: Is that all? No history of headache or evidence of increased intracranial pressure?

ATTENDING M.D: No.

VISITING M.D: Why a brain tumor?

ATTENDING M.D: Well, he has an intracranial lesion, and . . .

VISITING M.D: Did anything pertinent happen before the hemiparesis? One month is a short history, even for a glioblastoma multiforme!

PART II

ATTENDING M.D: Two months ago he fell from a ladder while painting his garage. He was momentarily unconscious but seemed to have had only a few skin contusions and was not hospitalized.

VISITING M.D: Ah, why did you withhold this information?

ATTENDING M.D: It was not withheld, I just thought it wasn't . . . Here comes the neurosurgeon now. Dr. Smith, what is your opinion in this case?

DR. SMITH: I have examined the patient very carefully. Neurologically he has aphasia, right-sided weakness with right-sided pyramidal signs, including positive Babinski, and absent abdominal reflexes. The optic disk is not choked and the films of the skull are normal. I believe he has a brain tumor, but he is not in

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good enough shape for air studies. I am afraid they might kill him.

VISITING M.D: The general medical examination is negative, I presume, and chest roentgenograms are normal. Because, with a short history of rapidly progressing intracranial disorder, we must think of metastases from lung, stomach, and elsewhere.

PART III

ATTENDING M.D: Yes, they are all negative. There was no history of gastrointestinal disease. Blood pressure is 110/70.

VISITING M.D: *(To Dr. Smith)* Your patient seems definitely moribund. Although he might have a tumor, I think he has a subdural hematoma.

DR. SMITH: No. Hemiparesis at the onset and then aphasia are not typical. Moreover, he does not have headache or stiff neck. The head injury was minor.

VISITING M.D: I know, but brain tumors usually cause headaches. What is important is that this man is dying of an affliction which came one month after a head injury. Head injuries that cause subdural hematomas are usually slight. He is stuporous and I find his pulse is 55. He might very well have increased pressure due to subdural . . .

DR. SMITH: And he might also very well have had a cerebrovascular accident.

VISITING M.D: I know that. But here is a man who is dying, and for whom we are doing nothing. We can't afford to miss a subdural hematoma when it is a simple task to put burr holes in the head, and there is no risk.

DR. SMITH: There is some risk.

VISITING M.D: Let me put it another way: Compared to what he is now facing, the risk is slight.

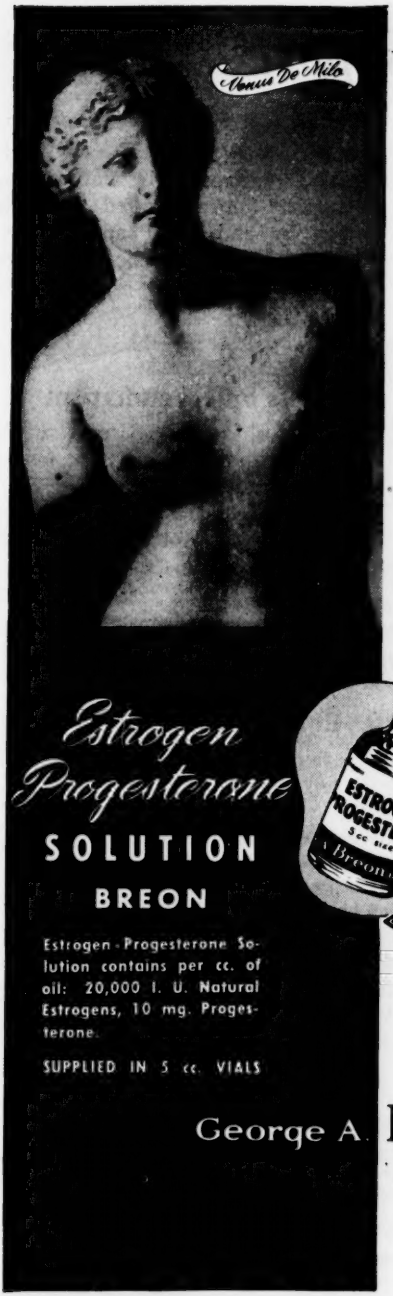
DR. SMITH: I believe you are wrong, but you may be correct. Let us take him up to the operating room at once.

PART IV

DR. SMITH: *(In the operating room)* As you speculated, there is a large subdural clot on the left frontal and motor area. I must confess we were fortunate to have your consultation. We all had discussed this possibility, but no one felt as strongly about it as you did.

PATIENT: *(On table; rapidly becoming alert)* Where am I?

"Yes, Mrs. Selby . . . mmm . . . yes . . . I'd, ah . . . well I'll tell . . . no, but . . . good, now I . . . mmm . . . mmm WELL, I'LL TELL YOU, MRS. SELBY . . ."



double deficiency

"Predisposed to Abortion" describes women who habitually abort because of ovarian hormonal deficiencies. Most spontaneous abortions are preceded by low estrogen and pregnandiol levels indicating that the corpus luteum or chorioplacental system is not producing enough estrogen and progesterone to maintain pregnancy.[1] Often in cases of this kind the woman can become a mother if Estrogen-Progesterone Solution is used to correct the DOUBLE DEFICIENCY. Estrogen-Progesterone is also useful in rapid treatment of secondary amenorrhea.[2] (Zondek technique.)

1. Vaux, H. W., and Rakoff, A. E.: Am. J. Obst. & Gynec., 50:353, Oct. 1945.
2. Zondek, B.: J.A.M.A., 118:705, Feb. 28, 1942.

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Short Reports

EXPERIMENTAL SURGERY

Prevention of Adhesions

Abdominal adhesions seldom form after surgery if motility of the gastrointestinal tract is maintained throughout the postoperative period. By stimulating peristalsis, prostigmine, hypodermically, may be a valuable adjunct to early feeding after surgery. Dr. C. A. Schiff and associates of Michael Reese Hospital, Chicago, found a definite diminution in formation of adhesions in dogs when intestinal activity was stimulated by food, water, and prostigmine after operation, as compared to dogs whose peristaltic functions were depressed. Similarly, early feeding and perhaps early ambulation, when not contraindicated by such surgery as abdominal anastomoses, should reduce occurrence of adhesions in patients.

Surgery 25:257-267, 1949.

MEETING

Congress on Rheumatism

Physicians from the United States and foreign countries will convene for the seventh International Congress on Rheumatic Diseases at the Waldorf Astoria Hotel in New York City, May 30 to June 3.

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ANTIBIOTICS

New Drug for Tuberculosis

An antibiotic, neomycin, effective in vitro against streptomycin-resistant strains of *Mycobacterium tuberculosis*, is reported by Drs. Selman A. Waksman and Hubert A. Lechevalier of Rutgers University, New Brunswick, N. J. Although not yet obtained in crystalline form, cultures containing the water-soluble, thermostable, basic compound inhibit growth of numerous gram-positive and gram-negative bacteria as well as microbacteria. The drug has slight or no toxic effect when given to animals. Contrary to experience with streptomycin, organisms do not become resistant to neomycin.

Science 109:305-307, 1949.

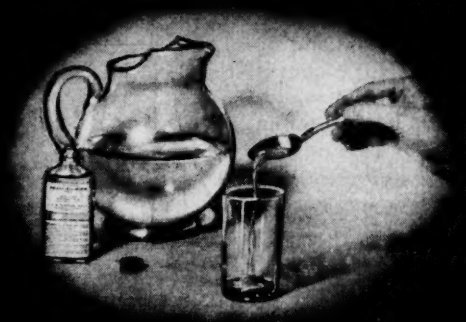
TREATMENT

Khellin for Bronchial Asthma

Extract from the seeds of the Arabian plant khellin may be beneficial to patients with bronchial asthma. The drug is particularly valuable for hypertensive patients, since systemic blood pressure is not affected, and for persons not relieved by safe amounts of adrenalin or aminophylline. Dr. Ralph H. Major of the University of Kansas, Kansas City, Kan., reports that all but 1 of 12 patients with severe bronchial asthma were greatly helped by the oral administration of 200 mg. of khellin twice or, occasionally, three times daily. The other patient could not tolerate the medication. Benadryl and pyribenzamine had not improved any of the patients and little relief was obtained from adrenalin or aminophylline. Action of khellin on bronchial asthma is slower than that of adrenaline or ephedrine, but more lasting.

J. Kansas M. Soc. 50:114-115, 1949.

Judicious Laxation



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ANTIBIOTICS

Evaluation of Aerosol for Chronic Sinusitis

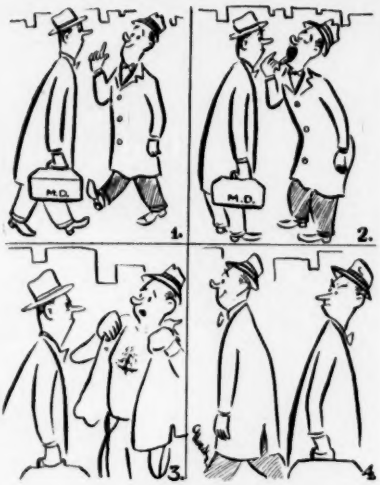
Penicillin aerosol given once daily offers no advantages over usual methods for treatment of ordinary chronic purulent sinusitis. However, the inhalant therapy is the best procedure for patients with severe, longstanding infection who have had little benefit from repeated sinus irrigations with or without sinus surgery, for children and adults who do not tolerate irrigation, and in cases associated with chronic bronchopulmonary disease. Appraisals were made by Dr. Eduardo R. Pons, Jr., and associates of Columbia University, New York City, by comparing results from four weeks' treatment of 68 patients with chronic purulent sinusitis of at least six months' duration. Allergic and nonallergic types were treated with daily aerosol-negative pressure with penicillin, ephedrine sulfate, and streptomycin. Optimum effects would probably be obtained by a combination of multiple daily aerosol-negative pressure treatments and weekly sinus irrigations.

J.A.M.A. 139:766-772, 1949.

RESEARCH

Receive Cancer Funds

The American Cancer Society has announced grants totaling $275,415 in support of cancer research to seven New York institutions. Awards were made to Columbia, Cornell, and New York universities, Sloan-Kettering Institute for Cancer Research Memorial Hospital, Mount Sinai Hospital, New York Botanical Gardens, and Rockefeller Institute for Medical Research.



EXPERIMENTAL MEDICINE

Antiulcer Effects of Thephorin

Formation of histamine-induced gastric ulcers in rats is greatly hampered by subcutaneous injection of thephorin. Atropine is ineffective. In dogs with Heidenhain pouches, gastric secretion induced by repeated histamine administration is reduced about 30% by thephorin. The striking antiulcer effects of the drug suggest the use of thephorin as a chemical vagotomy, declare Drs. G. Lehmann and Paul L. Stefko of Nutley, N. J.

J. Lab. & Clin. Med. 34:372-379, 1949.

CONVENTION

ACP Election

In New York, the American College of Physicians installed its thirtieth president, Dr. Reginald Fitz of Harvard Medical School. Dr. William S. Middleton, Dean, University of Wisconsin Medical School, is president-elect.

GET THE DROP ON HYPERTENSION

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". . . protect patients from the stimuli to which they respond by rises in blood pressure."[3]

Rutol is supplied in bottles of 100, 500 and 1000 tablets.

1. Donegan, J. M. and Thomas, W. A.: Amer. J. Ophthalmology, **31**: 671-78 (June) 1948.

2. Lockwood, B. C.: J. Mich. St. M. Soc., **46**: 550-54 (May) 1947.

3. Herrmann, G. R.: Synopsis of Diseases of the Heart and Arteries, St. Louis, The C. V. Mosby Co., 1944, p. 167.

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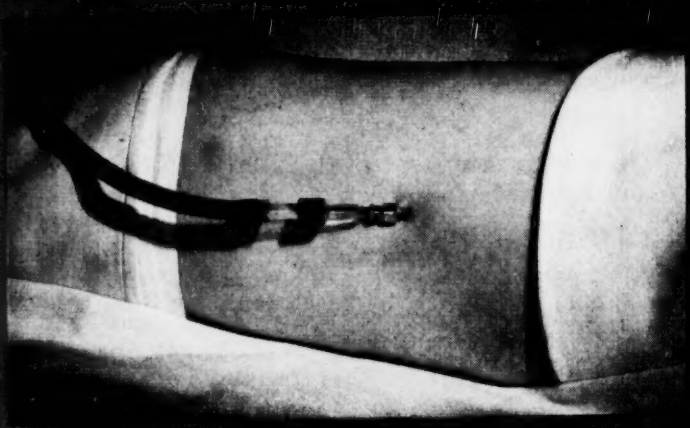

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Rapid Absorption

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"There is little effect on the blood pressure and on the respiration in five hundred times the therapeutic dose. The changes in the viscera at this dosage level are not significant."[3]

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The recommended dose is 250 viscosity units for a hypodermoclysis of 500 to 1,000 cc. Lesser amounts may be used for administration of drugs subcutaneously or smaller hypodermoclyses.

It may be: (a) injected through the wall of the rubber tube near the needle, (b) at the site of injection prior to hypodermoclysis or (c) dissolved directly in the solution (when the amount of fluid to be injected is small). Alidase is supplied in ampuls of 250 viscosity units.

REFERENCES:
1. Meyer, K.: Physiol. Rev. *27*:335 (July) 1947.
2. Sannella, L. S.: Yale J. Biol. & Med. *12*:433 (March) 1940.
3. Seifter, J., and Christian, J. J.: Presented at the New York Academy of Sciences in the Section of Biology, (Dec. 4) 1948.
4. Schwartzman, J.; Henderson, A. T., and King, W. E.: J. Pediat. *33*:267 (Sept.) 1948.

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OBSTETRICS

Dicumarol Therapy in Pregnancy

Development of the fetus may be seriously harmed by dicumarol administration during pregnancy. Dicumarol affects the prothrombin level of the fetus far more than that of the mother and may cause fetal death. These conclusions are reached by Dr. Alfred P. Kraus and associates of Michael Reese Hospital, Chicago, from studying the effects of continuous dicumarol administration on the intrauterine growth of pregnant rabbits. When supposedly safe levels of the drug were maintained in the rabbits, the baby rabbits were born with extremely low prothrombin levels. The mothers did not have excessive intrapartum or postpartum hemorrhage but the babies had definite hemorrhagic tendencies. When prothrombin levels of less than 10% were maintained in the mothers, even for only two days, the fetuses died in embryo.

J.A.M.A. 139:758-762, 1949.

ANTIBIOTICS

Treatment for Brucellosis

Aureomycin with dihydrostreptomycin provides the most effective therapeutic method yet found for brucellosis in man. The combination is convenient to administer and has a low incidence of toxicity. Plan of treatment recommended by Dr. Wallace E. Herrell of the Mayo Clinic, Rochester, Minn., and Dr. Tracy E. Barber of Austin, Minn., consists of 3 gm. of aureomycin orally in divided doses with simultaneous intramuscular injection of 2 gm. of dihydrostreptomycin daily. Therapy usually lasts twelve to fourteen days for acute brucellosis; when complicating lesions occur, administration should probably cover three to four weeks.

Proc. Staff Meet., Mayo Clin. 24:138-145, 1949.

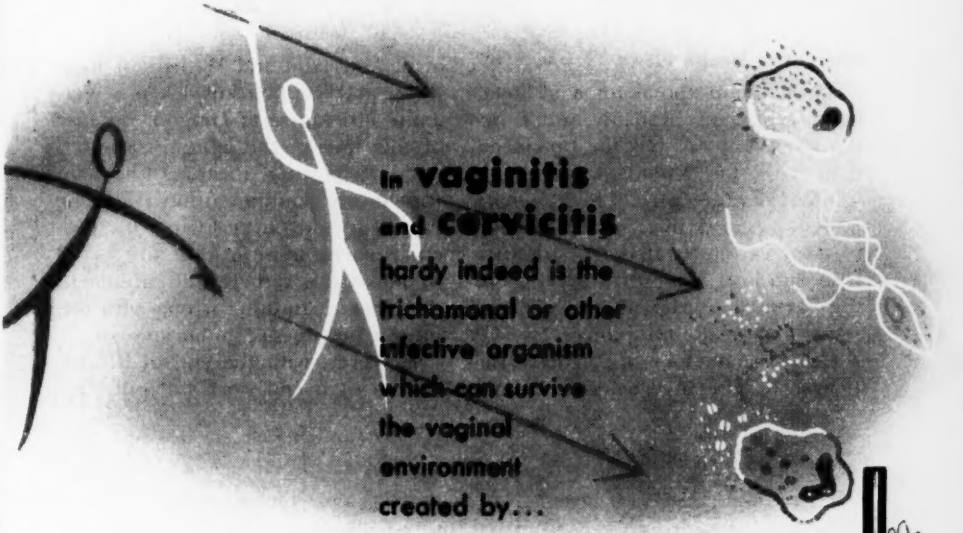
AWARDS

College of Physicians Honors Seven Doctors

Outstanding accomplishments in the field of internal medicine were acknowledged by awards at the thirtieth annual convocation of the American College of Physicians. The John Phillips Memorial Award was given to Dr. Edwin B. Astwood of Tufts College; the James D. Bruce Memorial Medal went to Dr. Stanhope Bayne-Jones of Cornell University; and Dr. James J. Waring of the University of Colorado received the Alfred Stengel Memorial Award. Elected as Masters of the College were Dr. Waring, Dr. Elliott P. Joslin of Harvard University, Dr. Jonathan C. Meakins of McGill University, and Dr. Virgil P. Sydenstricker of the University of Georgia.

how to get rid of

undesirable tenants



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Washington Letter

Alternative Health Plan

The latest proposal for a national health program probably won't become law but did put the brakes on the drive for President Truman's health insurance plan. Chief sponsor is Sen. Lister Hill, Alabama Democrat, an extremely liberal southerner who supports almost everything in the Truman program except civil rights and health insurance.

Other senate sponsors all have the liberal tag. They are Democrats O'Conor of Maryland and Withers of Kentucky, and Republicans Aiken of Vermont and Morse of Oregon. Because of this lineup, the administration is not in a position to attack the plan with much genuine enthusiasm. The President and Oscar Ewing, his Federal Security administrator, are forced to make the rather mild argument that there is nothing wrong with this idea, it just doesn't go far enough.

However, with the end of the session in sight and work still piled up,

"Emergency case of sunstroke at the golf course. May take quite some time."

without diaphragm
or other devices

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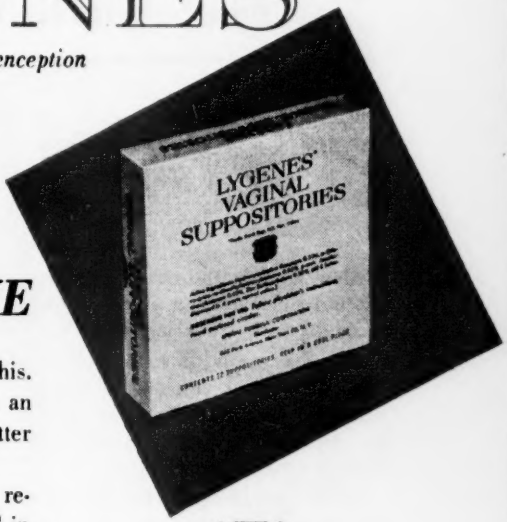
Vaginal Suppositories for Prevenception

PROVED Highly EFFECTIVE



Clinical tests over several years prove this. Small, non-odorous, stable, LYGENES form an adhesive, viscous cervical barrier in a matter of minutes without toxicity or irritation.

The effectiveness of suppositories as reported by Eastman and Seibels* was based in part on work done with LYGENES.

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Hydroxyquinoline Benzoate 0.30%
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Before prescribing LYGEL and LYGENES PREVENCEPTION PRODUCTS you are urged to send for literature and clinical trial packages.

*Eastman, N. J. & Seibels, R. E.: J.A.M.A., 16:139, 1949.

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the chance that even this legislation will receive serious consideration is slight.

Because the Hill bill is the only one on which a compromise could be reached, it is receiving more than passing attention. In general the bill would stimulate voluntary health insurance plans. Specifically it would provide for payment by the federal government of health insurance charges for "medically indigent."

The new Hill bill is modeled closely after the 1947 Hill-Burton hospital construction act under which state and local communities are now building more than seven hundred hospitals. Like the hospital bill, payments to states would be scaled on a per capita plus state income basis. The federal government would be required to pay at least one-third of the costs for any one state, but couldn't pay more than three-fourths of the total expenditure.

"Medically Indigent," a New Definition

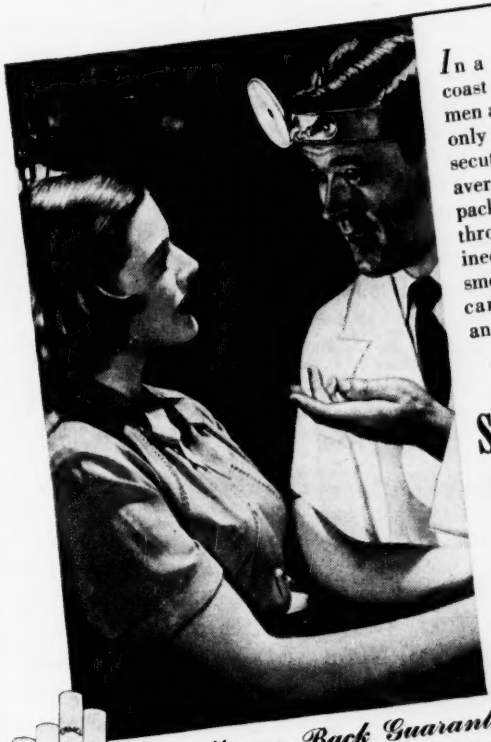
There are three points about this bill that are important to the medical profession.

First, it would bring medical attention to more people.

Second, it is not a national compulsory payroll deduction health insurance plan in the meaning of the Truman plan. Its closest approach is a provision that federal and state employees may, at their own written request, have monthly health insurance premiums deducted from their checks.

The third and last point is perhaps the most significant. It departs sharply from the concept of Sen. Taft that the only sound health program must include a "means test," that is, an investigation or threat of an investigation to establish that the recipient

Here's what throat specialists reported about Camel Mildness—



In a recent coast-to-coast test, hundreds of men and women smoked only Camels for 30 consecutive days . . . on the average of one to two packs a day. Each week throat specialists examined the throats of these smokers, a total of 2470 careful examinations, and reported

"NOT ONE SINGLE CASE OF THROAT IRRITATION due to smoking CAMELS"

Money-Back Guarantee! Try Camels and test them as you smoke them. If, at any time, you are not convinced that Camels are the mildest cigarette you've ever smoked, return the package with the unused Camels and we will refund its full purchase price, plus postage. (*Signed*) R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina.

According to a Nationwide survey:

MORE DOCTORS SMOKE CAMELS

than any other cigarette

Doctors smoke for pleasure, too! And when three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!

of free medical attention actually is unable to pay the charges.

This bill sets up something new in federal legislation, a "medically indigent" class, as distinguished from simply "indigent." Furthermore, it specifically opens the door to liberal interpretation of what constitutes a "medically indigent" patient.

Mortgage Not Required

State and local authorities would decide who can and who can't pay a doctor or hospital bill, and there is no requirement in the law that a patient must be destitute before service is free. To put it bluntly, the law does not require that the worker mortgage his home or the farmer sell his last cow before he becomes eligible.

Just What Politicians Needed

Whatever happens to this bill, it was welcomed by a great many senators and representatives. It gives them something they can cling to without offending either side in the health legislation argument. On one hand, it is a great deal more than the Taft, the AMA, or any other similar plan promised; on the other it does not carry the label of state medicine.

Doctors Slow to Answer Services' Appeal

Army and Navy aren't making much progress in their campaign to sign up young physicians and dentists. The ratio is about 1 for every 10 who write in for information.

The campaign for the last two years

has been directed at men who had some or all of their education at government expense and have not served, or who were deferred from the draft to complete their education at their own expense.

The new defense secretary, Louis Johnson, has discovered another way to put pressure on these men; he's asking hospital administrators to check over their staffs for men who fit into these classifications. Johnson is also appealing to older physicians to convince the young men that they owe this service to their country.

Army Hospitals Open to Reservists

The Army this summer will allow reservice officers to take their six-week ROTC training in General Hospitals instead of the Medical Field Service School. It is also promising to reduce the number of hours devoted to essentially military subjects in the summer program.

However, only men who have had one year of active duty will be eligible for these advantages. With a straight face, the Army explained it this way, "Veterans of one year or more of active military service are already qualified in most basic military subjects, and their reaction to refresher training in military subjects was not always conducive to the best interests of the program."

Lilienthal Urges "Balanced View"

David E. Lilienthal, chairman of the Atomic Energy Commission, is

continuing his efforts to win the cooperation of the medical profession. He wants physicians to help him spread the gospel of a common-sense consideration of the atom. One example was the conclusion of his address before the American College of Physicians: "Our chief reliance of good sense and judgment will be found among the men and women in the neighborhoods of America. And it is here that you doctors, whose work itself inculcates a balanced view about life's hazards and its hopeful side, can be a mainstay to the rest of us."

AEC has approved twenty-one new research projects. Recipients include universities of Cincinnati, Delaware, Denver, Florida, Kansas, Michigan, North Carolina, and Washington; also, Amherst, Columbia, Duke, Henry Ford Hospital (Detroit), Johns Hopkins, Meharry Medical College (Nashville), Mount Sinai Hospital (New York City), Purdue, North Carolina State College, and Yale.

Notes

Interesting dental information is being produced at the National Institute of Dental Research through research with the electron microscope on tooth structure. While magnifications up to 20,000 are not unusual, most of the work is done at relatively low magnification. . . . The National Cancer Institute documentary film "The Scientist vs. Cancer" may be cut for theater distribution.

Correspondence

(Continued from page 24)

fortified with vitamin D, but the 400-unit level is used for that which is fortified. Second, the Council on Foods and Nutrition of the American Medical Association states that milk containing 400 USP units of vitamin D per quart, when ingested in customary amounts fed to infants, will provide sufficient vitamin D to prevent rickets and to promote optimal growth and tooth development (*J.A.M.A.* 116:1788, 1941). The October 1948 revision of the recommended dietary allowances published by the National Research Council Food and Nutrition Board gives 400 USP units as the recommended daily dietary allowance of vitamin D for infants and children and makes the statement that evidence exists that from 300 to 400 units daily commonly promotes retention of calcium in infancy when the calcium intake is satisfactory.

Point No. 2 states that plain cod-liver oil contains both vitamin A and vitamin D. This is true and, of course, it is true of vitamin D fortified evaporated milk and other forms of vitamin D fortified whole cow's milk in view of the content of vitamin A naturally present in whole cow's milk.

Point No. 3 regarding the learning of the taste of cod-liver oil does not seem pertinent to the question.

It is somewhat difficult to interpret point No. 4, although if it is intended

to indicate that a vitamin fortified whole natural food such as vitamin D fortified evaporated milk is undesirable, such an indication is unjustified and is not supported by evidence.

In the case of point No. 5, which states that unit for unit most standard cod-liver oil should be cheaper than enriched milk, we must point out that evaporated milk is fortified with vitamin D without any added cost to the consumer.

As to point No. 6, we are wondering whether this might be misinterpreted. It would be unfortunate if it were understood to mean that there are occasions when an adequate daily amount of milk need not be given.

In summary, it seems to us that the answer as given is somewhat misleading in that it does not admit or take into consideration the vast amount of clinical evidence indicating the desirability of the use of vitamin D fortified evaporated milk in the feeding of infants and children. It is true, of course, that the use of vitamin D fortified evaporated milk does not interfere in any way with the simultaneous administration of other sources of vitamin D such as cod-liver oil or other fish-liver oils if the doctor feels that this is needed. There is a great deal of evidence demonstrating the desirability of a routine and dependable dietary source of vitamin D such as is provided by vitamin D fortified evaporated milk.

H. L. SIPPLE, PH.D.

Chicago

Evaluation of Disability in Industrial Injury

EARL D. MCBRIDE, M.D.*
University of Oklahoma, Oklahoma City

MEDICAL testimony in personal injury lawsuits requires competence in evaluation of disability. Though not taught in medical schools, disability evaluation can be learned like any other scientific subject, and once mastered is a pleasant field of practice.

Earl D. McBride, M.D., emphasizes the necessity of thoroughness in gathering information. Physical defects not related to the injury in question are examined and all prior accidents and disabilities recorded.

Variation in posture, anatomic asymmetry, or defect of vision sometimes attributed to a recent accident may be congenital or due to childhood disease. An oversight, omission, or inconsistency sometimes causes embarrassment under cross-examination.

The industrial cause of dysfunction should be carefully traced, including details of the accident and attendant circumstances. Extent and severity of immediate disability, treatment, and course of recovery are investigated. Periods of total incapacity are significant, especially if related to nonunion of fracture, inflammation, swelling, drainage, or surgery.

Above all, the medical witness must

* Disability evaluation. J. Indiana M. A. 42:19-22, 1949.

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ALLIMIN is the original garlic tablet recommended for use as a carminative. Each tablet contains 4¾ grains of dehydrated garlic, flavor modified with dried parsley and sugar-coated for palatability.

The recommended dose is 2 tablets after meals with a little water. Best results are obtained when the medication is continued three times daily. The tablets should be swallowed whole, not chewed.

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determine what the injured person can or cannot do as a result of disability. The industrial court then interprets the functional loss in terms of earning power.

Much more must be known than is revealed by an ordinary physical examination. When the body is changed in size, shape, length, volume, or range of motion, physics and geometry as well as physiology are concerned. The inflexible back can no longer act as a crane. Stiffening of the ankle turns foot and leg into a rigid pedestal, and a crooked bone shaft may disorganize movement in all related parts.

Industrial awards are usually based on amputation values established by law. When a part is permanently but not completely disabled, percentage of loss is determined by medical opinion according to specific standards.

Ability to lift, pull, walk, throw, and perform other acts depends on the factors of speed, coordination, strength, security, and endurance. With respect to industrial employment, important traits are safety as a worker and good physical appearance. All these factors may be given definite values totaling 100%; for example, strength, endurance, and coordination 20% each, and speed, safety, security, and physical appearance 10% each.

When the extent of physiologic and anatomic deficiency is known, functional loss is calculated for each factor. If motion remains slightly limited in an injured arm, deductions may be made, such as 2.5% for delayed action, 3% for weakness, and 5% for awkwardness. Since amputation represents 100% loss of function, compensation is estimated accordingly.

The expert must also be able to determine relative disability of the various body parts. If an arm is injured, what percentage of function has the body lost? The award for arm amputation may be pay for 250 weeks and for total body disability, 500 weeks. The arm then has half the body value, and 20% loss of arm function equals 10% loss to the body as a whole.

Other calculations are necessary when several parts of an extremity are affected, since losses must not exceed the percentage for total disability.

Industrial Hygiene Station

The first field station west of the Mississippi for industrial hygiene is being set up with laboratories at the University of Utah, Salt Lake City, announces Dr. Leonard A. Scheele, Surgeon General of the U.S. Public Health Service. Advice will be offered on health conditions in manufacturing plants and an analysis will be undertaken of atmospheric contaminants of western working environments.

Amputees Organize

An organization known as Possibilities Unlimited has been established by amputees to help others similarly disabled. When the group learns of a new amputee, a member with the same amputation is sent to show how he has met the handicap and offer the services of the organization. Membership of about 1,000 is largely centered in Cleveland with other chapters in Youngstown and Columbus. Motto of the organization is, "It's not what you have lost. It's what you have left."

Current Books & Pamphlets

This catalogue is compiled from all available sources, American and foreign, to insure a complete listing of the month's releases.

Medicine

AN INTRODUCTION TO CARDIOLOGY *by* Geoffrey Bourne. 264 pp. Edward Arnold & Co., London. 18*s*.

DIABETIC MENUS, MEALS AND RECIPES *by* Betty M. West. 254 pp. Doubleday & Co., New York City. $2.95

A.M.A. INTERNS' MANUAL *by* the American Medical Association. 201 pp. W. B. Saunders Co., Philadelphia. $2.25

CLINICAL DIAGNOSTIC METHODS OR, THE EXAMINATION OF PATIENTS *by* Charles G. Lambie *and* Jean E. Armytage. 2 vols., 1,095 pp., ill. Grahame Book Co., Sydney, Australia. £7 7*s*.

Surgery

HANDBOOK OF SURGERY *by* Eric C. Mekie *and* Ian Mackenzie. 2d. ed. 780 pp., ill. E. & S. Livingstone, Edinburgh. 20*s*.

CLINICAL ASPECTS AND TREATMENT OF SURGICAL INFECTIONS *by* Frank Lamont Meleney. 840 pp., ill. W. B. Saunders Co., Philadelphia. $12

SURGERY ORTHODOX AND HETERODOX *by* Sir Heneage Ogilvie. 241 pp. Blackwell Scientific Publications, Oxford. 12*s*. 6*d*.

ATHLETIC INJURIES: PREVENTION, DIAGNOSIS AND TREATMENT *by* Augustus Thorndike. 3d ed. 243 pp., ill. Lea & Febiger, Philadelphia. $3.75

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DIE WEIBLICHEN SEXUALHORMONE IN DER PHARMAKOTHERAPIE *by* O. Mühlbock et al. 300 pp. Hans Huber, Bern, Switzerland. 24.80 Sw. fr.

THERAPEUTISCHES TASCHENBUCH *edited by* G. Ruepp. 394 pp. Hans Huber, Bern, Switzerland. 12 Sw. fr.

SEXUALHORMONTHERAPIE *by* E. Tscherne. 231 pp. Wilhelm Maudrich, Vienna. 75 Sch.

Physiology

LA MÉSURE DU RENDEMENT CIRCULATOIRE *by* A. H. Israel *and* C. H. Rendu. 75 pp. L'Expansion Scientifique Française, Paris. 200 fr.

CONDITIONED REFLEXES AND NEURON ORGANIZATION *by* Jerzy Konorski. *Translated by* Stephen Garry. 276 pp. The Macmillan Co., New York City. $4

A TEXTBOOK OF GENERAL PHYSIOLOGY *by* Philip H. Mitchell. 4th ed. 927 pp., ill. McGraw-Hill Book Co., New York City. $7.50

DIE FUNKTIONELLE ORGANISATION DES VEGETATIVEN NERVENSYSTEMS *by* W. R. Hess. 226 pp. Benno Schwabe & Co., Basel, Switzerland. 18.50 Sw. fr.

SYNOPSIS OF PHYSIOLOGY *by* A. Rendle Short et al. 4th ed. 346 pp. Williams & Wilkins Co., Baltimore. $6

Anesthesia

ANESTHESIA: PRINCIPLES AND PRACTICE *by* Alice M. Hunt. 142 pp. G. P. Putnam's Sons, New York City. $2.60

Obstetrics & Gynecology

OBSTETRICS AND GYNAECOLOGY: A SYNOPTIC GUIDE TO TREATMENT *by* Beatrice M. Willmott Dobbie. 358 pp., ill. H. K. Lewis & Co., London. 20*s*.

EDEN AND HOLLAND'S MANUAL OF OBSTETRICS *by* Alan Brews. 9th ed. 796 pp., ill. J. & A. Churchill, London. 42*s*.

THE 1948 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY *edited by* J. P. Greenhill. 603 pp., ill. Year Book Publishers, Chicago. $5

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MAYO MEMORIES AND OTHER STORIES *by* Lucia Johnson Edmondson. 128 pp. Wilcox & Follett Co., Chicago. $2

THE SHAKESPEARE CIRCLE: A LIFE OF DR. JOHN HALL, SHAKESPEARE'S SON-IN-LAW: WITH GLIMPSES OF THEIR INTIMATE FRIENDS AND RELATIONS *by* C. Martin Mitchell. 116 pp., ill. Cornish Brothers, Birmingham, England. 12*s.* 6*d.*

Tuberculosis

LUNG DUST LESIONS (PNEUMOCONIOSIS) VERSUS TUBERCULOSIS *by* Lewis Gregory Cole. 474 pp., ill. American Medical Films, White Plains, N.Y. $10

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THOMSON-WALKER'S GENITO-URINARY SURGERY *revised by* Kenneth Walker. 3d ed. 974 pp., ill. Bassell & Co., London. 60*s.*

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INDEX TO THE LITERATURE OF EXPERIMENTAL CANCER RESEARCH, 1900-1935. 1,057 pp. Donner Foundation, Philadelphia. Apply.

Pathology

HISTOPATHOLOGY OF IRRADIATION FROM EXTERNAL AND INTERNAL SOURCES *by* William Bloom. 808 pp., ill. McGraw-Hill Book Co., New York City. $8

ATLAS OF ORAL AND FACIAL LESIONS *by* Ralph Howard Brodsky. Part I, 129 pp., ill. Part II, slides. Williams & Wilkins Co., Baltimore. $80

AN ATLAS OF BONE-MARROW PATHOLOGY *by* M. C. G. Israels. 79 pp., ill. Heinemann Medical Books, London. 30*s.*

Proctology

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Pharmacology

BRITISH PHARMACOPOEIA 1948. 954 pp. Constable & Co., London. 45*s*.

SYNOPSIS OF THE BRITISH PHARMACOPOEIA, 1948 *by* H. W. Gadd. 15th ed. 249 pp. Baillière, Tindall & Cox, London. 5*s*.

Otolaryngology

TRAITEMENT CHIRURGICAL DE L'OTOSPONGIOSE *by* M. Sourdille. 253 pp., ill. Masson & Co., Paris. 750 *fr*.

DIE KLINIK DER LABYRINTHITIS UND PARALABYRINTHITIS AUF GRUND DES RÖNTGENBEFUNDES *by* Horst Wullstein. 150 pp., ill. Georg Thieme, Stuttgart. 28 M.

Psychiatry

AN OUTLINE OF PSYCHOANALYSIS *by* Sigmund Freud. *Translated by* James Strachey. 127 pp. W. W. Norton & Co., New York City. $2

THE PROBLEM DRINKER *by* Joseph Hirsh. 211 pp., ill. Duell, Sloan & Pearce, New York City. $3

WHICH WAY OUT: STORIES BASED ON THE EXPERIENCE OF A PSYCHIATRIST *by* Clarence P. Oberndorf. 236 pp. International Universities Press, New York City. $3.25

Public Health

MEASUREMENTS OF THE PUBLIC HEALTH *by* F. A. E. Crew. 237 pp. Oliver & Boyd, Edinburgh. 18*s*.

A HEALTH PROGRAM FOR COLLEGES. A REPORT OF THE THIRD NATIONAL CONFERENCE ON HEALTH IN COLLEGES. 152 pp. National Tuberculosis Association, New York City. $2

Hospitals

THE HOSPITAL IN CONTEMPORARY LIFE *edited by* Nathaniel W. Faxon. 288 pp. Harvard University Press, Cambridge, Mass. $5

Nursing

MODERN METHODS OF MENTAL TREATMENT: A GUIDE FOR NURSES *by* J. W. Fisher. 104 pp., ill. Staples Press, London. 6*s*.

NURSING FOR THE POLIOMYELITIS PATIENT. 88 pp., ill. *Prepared and published by* the Joint Orthopedic Advisory Service, 1790 Broadway, New York City. Apply.

TESTS AND MEASUREMENTS APPLIED TO NURSING *by* Hyman Krakower. 176 pp. G. P. Putnam's Sons, New York City. $3.50

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*West. J. Surg., Obstet. & Gynec., 51:50, 1943; J.A.M.A., 128:490, 1945.

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Pertinent information concerning new releases on medical subjects and other recent films that are still available.

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THE USE OF DIGITALIS IN HEART FAILURE *by* Harry Gold, M.D. 16 mm., color, sound. 1,600 ft., 45 min. Loan. Film Library, Wyeth, Inc., 1600 Arch St., Philadelphia 3.

OXYGEN THERAPY IN HEART DISEASE *by* Linde Air Products Co. 16 mm., sound. 30 min. Rental $1 per week plus transportation. American Heart Assn., 1790 Broadway, New York 19.

Currently Available

About three weeks should be allowed for booking because many of these films are in considerable demand. Except when noted, all films are silent and 16 mm. Black and white films are designated b/w, otherwise the film is in color.

DIARY OF A SERGEANT *by* Office of War. Information. 3 reels, sound. $3. A story of rehabilitation. New York University Film Library, 25 Washington Place, New York 3.

OBSTETRICS AND GYNECOLOGY. The following films available from Billy Burke Productions, 7416 Beverly Blvd., Hollywood 36, Calif. Rental $15, sale $85 each. All are 400 ft., 15 min:

A NORMAL DELIVERY; LOW CERVICAL CESAREAN SECTION; EXTRAPERITONEAL CESAREAN SECTION; TRIPLET PREGNANCY.

THE BODY FIGHTS BACTERIA. Sound, 20 min. Rental $4. New York University Film Library, 25 Washington Place, New York 3.

ABDOMINAL SURGERY. The following films available from Billy Burke Productions, 7416 Beverly Blvd., Hollywood 36, Calif. Rental $15, sale $85 each. All are 400 ft., 15 min:

PERITONEOSCOPY; VAGUS RESECTION FOR PEPTIC ULCER; GASTRIC RESECTION FOR DUODENAL ULCER; CLOSED GASTRECTOMY; GASTROENTEROSTOMY FOR DUODENAL ULCER; SPLENECTOMY FOR GAUCHER'S DISEASE; EXTERIORIZATION OPERATION FOR CANCER OF SIGMOID; COLOTOMY FOR POLYP; COOPER'S LIGAMENT HERNIORRHAPHY.

WHICH TWIN HAS THE TONI?

(and which has the $15 beauty shop wave?) See answer below

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Here, Doctor, is why Toni has given more than 67 million successful permanents!

It's the wave with the natural look! Knowing that the ultimate in permanent waving is a close approximation of naturally curly hair, Toni research chemists have perfected a mild, gentle formula whose chemical action is so gradual—it results in softly waved hair. So natural-looking, in fact, microscopic examination fails to reveal significant difference between Toni-waved hair and natural curls. Laboratory analysis determines no substantial physical or chemical change. Exhaustive stress and strain tests show maximum retention of elasticity and strength. Through the unceasing efforts of the laboratory, Toni research has developed a permanent wave that looks like nature's own. That's why we say—the wave that gives that natural look is Toni Home Permanent.

Which twin has the Toni? The Toni Twins are Kathlene and Helene Crescente. Kathlene, the twin on the right, has the Toni.

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PATIENTS . . . I Have Met

The editors will pay $1 for each story published. No contribution will be returned. Send your experiences to the Patients I Have Met Editor, MODERN MEDICINE, 84 South Tenth St., Minneapolis 3, Minn.

Right Approach

"And what seems to be your trouble, Madam?" I asked the new patient.

"Oh I have so many troubles," she answered, "but my most serious one is a bad case of hemorrhoids. I've come to you with that end in view."—A.E.D.

"My eyes are bad. Would you mind reading aloud?"

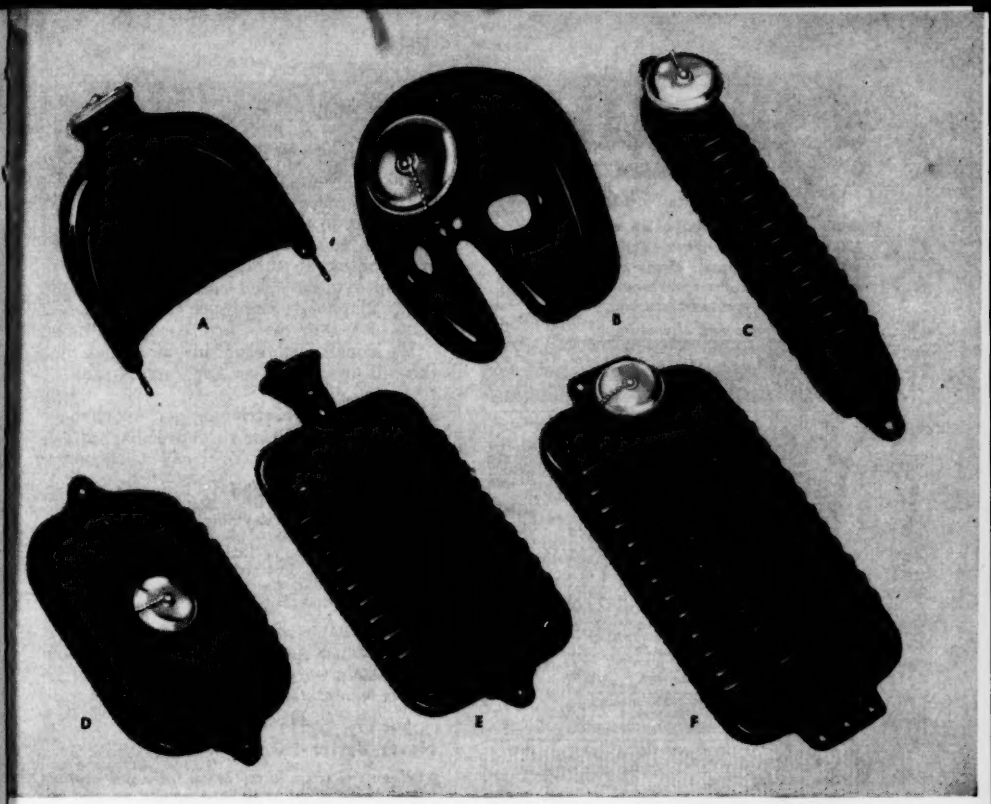
Discommoding

My new secretary received a call from a patient who explained in broken English that she was sick and couldn't go to the bathroom. Promptly and efficiently the secretary informed me that the patient was having urinary retention. I hurriedly made the call, feeling sure that she must be in great discomfort. Upon arrival at the scene, to my surprise, the plumbing needed to be fixed.—W.L.B.

Knew What She Meant

I called on a young mother just home from the hospital. She had had too much milk, she said, so they had used the stomach pump on her. When I asked her if she didn't mean a breast pump, she said quite emphatically:

"I do *not*. It was a stomach pump. They pumped me dry so the baby wouldn't get so much milk in his *stomach*."—P.H.



Now ready! B. F. Goodrich's new Anode Latex hospital products!

THESE hospital and sick-room products are completely new and superior in every way to any we've ever offered. They cost more — initially; in the long run *they cost considerably less!*

As illustrated above:

A. ICE HELMET—Cat. No. 63—Two quart capacity, with screw type stopper, tie tabs.

B. FACE or SINUS MASK—Cat. No. 31—For hot or cold treatments. 1½ quart capacity, screw type stopper.

C. THROAT or TONSILLECTOMY BAG—Cat. No. 45—One quart capacity, 13¾" long by 3 3/16" wide. Screw type stopper.

D. FLAT ICE BAG—Cat. No. 33—Two quart capacity. 11½" long by 8½" wide. Screw type stopper.

E. CORRUGATED WATER BOTTLE—Cat. No. 55—2½ quart capacity, 13¾" long by 8⅜" wide. Hard rubber stopper.

F. COMBINATION WATER BOTTLE and ICE BAG—Cat. No. 59—Two quart capacity, 15¼" long by 8⅜" wide. Screw type stopper. Ear or Mastoid bag—Cat. No. 42. (Not illustrated).

Note the special new corrugated design. This permits complete flexibility, allows the water bottles and ice bags to follow body contour—resulting in easier, more effective treatment.

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B.F.Goodrich

FIRST IN RUBBER

Plea for Sympathy

(Note received by Dr. J.A.W., Jr., from one of his patients)

Taking your prescription of 1/28/49. Getting worse—Damn it.

Present symptoms: *Burning* in pit of stomach. *Extreme* discomfort after eating or drinking anything. Everything seems to stop *between* ribs. Continued burping.

My diagnosis: Improper elimination in spite of two or three laxative pills a day.

Do something about this and send me the bill or give me an appointment and a little sympathy.

Equestrienne par excellence
(Prior to above disability)

Jawbreaker Preferred

"Doc, if there's anything wrong with me, say it plain so I can understand it."

"Very well. You're lazy."

"Gee, thanks, Doc. Now give me the scientific name for it. I've got to report it to my wife."—A.O.T.

"That last payment on the car puts us completely out of debt—we don't owe a thing except the doctor!"—W.L.W.

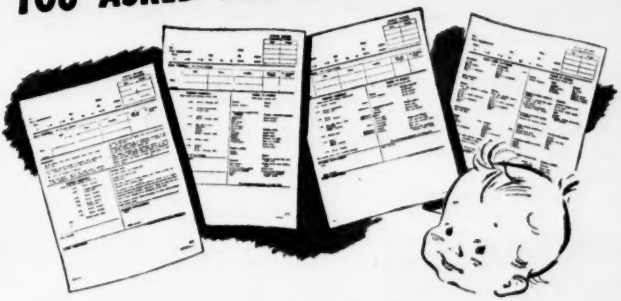
Never Better Late

When she came to my office for a pre-marital blood test, the bride-to-be said she wanted to postpone parenthood for a time. I fitted her with a diaphragm and instructed her in its use. In less than four months she returned, suspecting she was pregnant. I confirmed her suspicions. She was dismayed and couldn't understand how it could have happened. I asked her if she had used the diaphragm faithfully.

"Oh yes, doctor," she exclaimed. "I always get out of bed the minute after and put it on."
—R.R.

"How much water did you want me to take these pills in, Doc?"

YOU ASKED FOR THESE TIMESAVERS



Last year, in response to numerous requests, we offered Feeding Direction Forms for your young patients. Now these flexible, comprehensive forms (birth to 3 mos., 3-6 mos., 6-10 mos., over 10 mos.) have been revised to incorporate your further suggestions.

These forms are real timesavers, easy to use, complete, adaptable. Each form contains: formula or diet charts; food lists you may supplement or delete from; food preparation suggestions; weight record to be kept between office visits; spaces for next appointment, individual directions, etc.

Imprinted with your name, address and telephone number, these Feeding Direction Forms are offered as a service by the makers of Ralston Cereals.

Instant Ralston and Hot Ralston Cereals are composed of whole-grain wheat with added wheat germ, thiamine and iron phosphate.

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*Address*_____

*City*_____ *Zone*____ *State*_____

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In the Treatment of Nutritional and Secondary Anemia

Each Capsule Provides the right amount of IRON, LIVER and B-COMPLEX to increase the hemoglobin quickly . . .

Patients often reach a certain point on the ordinary type of hematinic preparation and then fail to make any further progress. When HEMATOVALS "Ulmer" are prescribed, however, even the most difficult cases respond more rapidly and completely. This effective, well-balanced combination assures a quicker, more complete response.

Two HEMATOVALS "Ulmer" taken at mealtimes three times per day supply sufficient Iron, Liver Concentrate (Secondary Fraction) and the approximate daily allowances of all the B-Complex Vitamins so balanced that they completely remove the possibility of error. Highly effective, easily administered, well tolerated and economical, they contain a high potency B-Complex which helps to quickly overcome the anorexia so frequently associated with this type of anemia.

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When dependence must be placed on the "jelly alone" method, there is no better product available than "RAMSES"* Vaginal Jelly† because:

1. It provides rapid spermatocidal action.

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3. Direct-color photographs show that it will occlude the cervix for ten hours.

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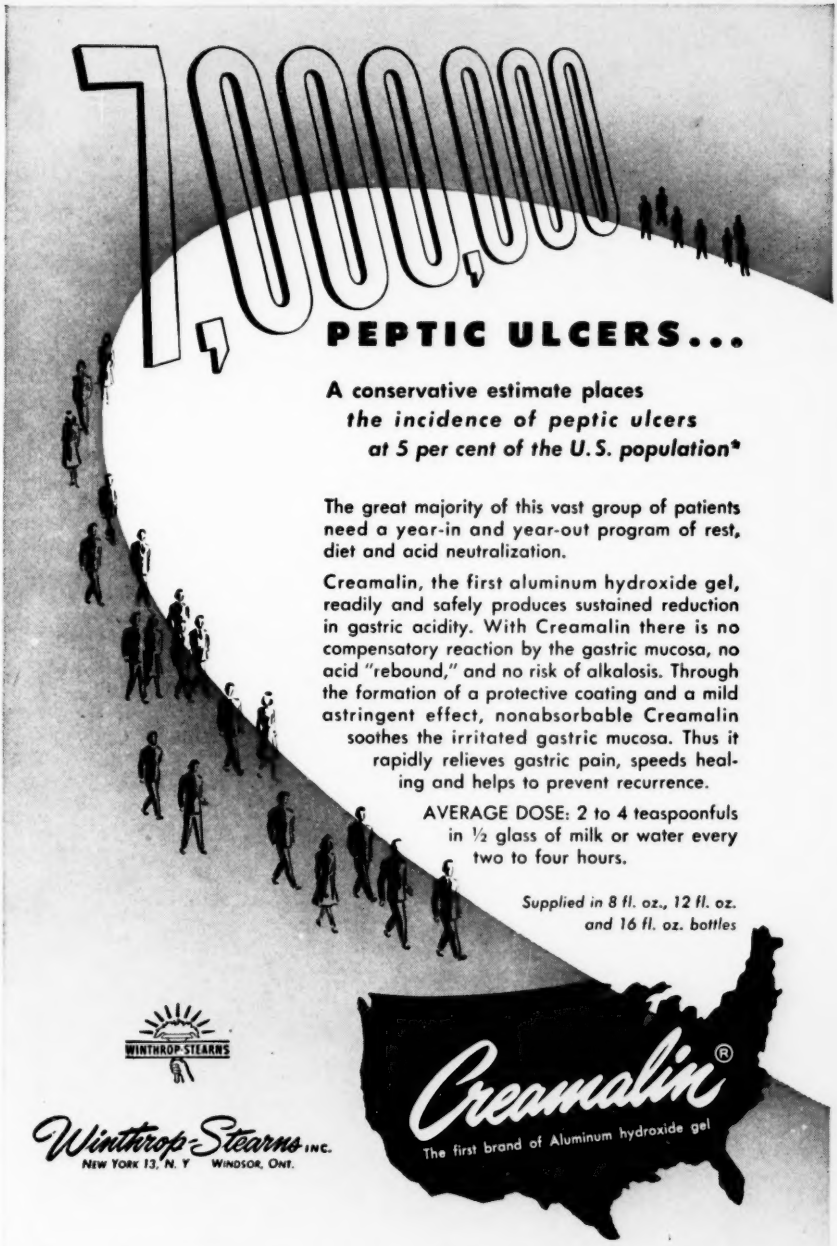

PEPTIC ULCERS...

A conservative estimate places *the incidence of peptic ulcers at 5 per cent of the U. S. population***

The great majority of this vast group of patients need a year-in and year-out program of rest, diet and acid neutralization.

Creamalin, the first aluminum hydroxide gel, readily and safely produces sustained reduction in gastric acidity. With Creamalin there is no compensatory reaction by the gastric mucosa, no acid "rebound," and no risk of alkalosis. Through the formation of a protective coating and a mild astringent effect, nonabsorbable Creamalin soothes the irritated gastric mucosa. Thus it rapidly relieves gastric pain, speeds healing and helps to prevent recurrence.

AVERAGE DOSE: 2 to 4 teaspoonfuls in ½ glass of milk or water every two to four hours.

Supplied in 8 fl. oz., 12 fl. oz. and 16 fl. oz. bottles

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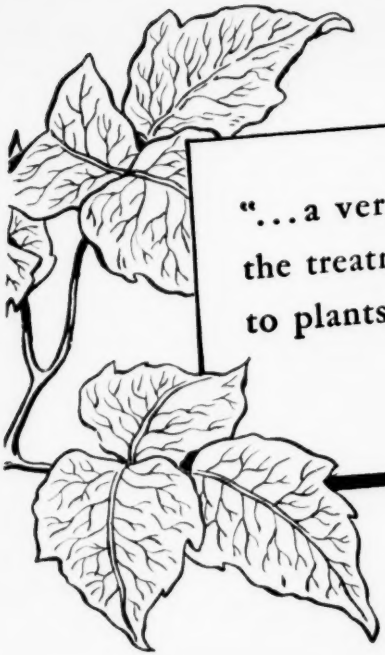
*Bureau of Health Education, A.M.A. Hygeia, 24:352, May, 1946.



"...a very valuable adjunct to the treatment of dermatitis due to plants, especially

POISON IVY..."[1]

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Applied locally, Pyribenzamine hydrochloride usually gives prompt and prolonged relief from itching in dermatitis venenata due to poison ivy, oak or sumac.

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"In many instances the local skin conditions are, of course, more rapidly and more completely eradicated by the combined topical and oral administration of this drug."[1]

1. Carrier, R. E., Krug, E. S., and Glenn, H. R.: J. Lancet, 68: 240, June 1948.
2. Feinberg, S. M. and Bernstein, T. B.: J. of A.M.A., 134: 10, July 1947.

PYRIBENZAMINE CREAM, 2 per cent (water-washable base), jars of 50 Gm. and 1 pound; Ointment, 2 per cent (petrolatum base), jars of 50 Gm. and 1 pound.

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